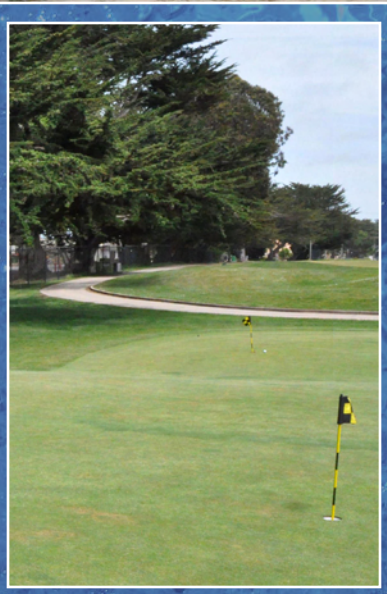
Pacific Grove Local Water Project



Final Environmental Impact Report

SCH No. 2014021058

November 2014

Brezack & Associates Planning

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Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effect
ASBS	Area of Special Biological Significance
B&AP	Brezack & Associates Planning
BMPs	Best Management Practices
CA MUTCD	California Manual on Uniform Traffic Control Devices
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
Caltrans	California Department of Transportation
CAW	California American Water Company
CBRA	Coastal Barriers Resources Act
CCLEAN	Central Coast Long-term Environmental Assessment Network
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
City	City of Pacific Grove
CNPS	California Native Plant Society
CSIP	Castroville Seawater Intrusion Project
Division	SRWCB Division of Clean Water Programs
Draft EIR or DEIR	Draft Environmental Impact Report
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EO	Executive Order
ESA	Endangered Species Act
Final EIR or FEIR	Final Environmental Impact Report
FPPA	Farmland Protection Policy Act
LCP	Local Coastal Program
MBR	Membrane bioreactor
MMRP	Mitigation Monitoring and Reporting Program
MRWPCA	Monterey Regional Water Pollution Control Agency
NAAQS	National Ambient Air Quality Standards
NCCAB	North Central Coast Air Basin
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Registry of Historic Places

Ocean Plan	Water Quality Control Plan for Ocean Waters of California
PAHs	Polynuclear Aromatic Hydrocarbon
PG&E	Pacific Gas & Electric
PGLWP	Pacific Grove Local Water Project
PGMC	Pacific Grove Municipal Code
PPWWTP	Point Pinos Wastewater Treatment Plant
RTP	Regional Treatment Plant
SDWA	Safe Drinking Water Act
USFWS	U.S. Fish and Wildlife Service
SHPO	State Historic Preservation Office
SIPs	State Implementation Plans
SRF	State Revolving Fund
SRWCB	State Water Resources Control Board
SRWTP	Satellite Recycled Water Treatment Plant
SSA	Sole Source Aquifer
USAN	Underground Service Alert North
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WATCH	Work Area Traffic Control Handbook

SECTION 1.0 INTRODUCTION

1.1 INTRODUCTION

The City of Pacific Grove (City), as the CEQA Lead Agency, has prepared this Final Environmental Impact Report (Final EIR or FEIR) for the Pacific Grove Local Water Project (PGLWP) in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The EIR is a public document for use by the City, other governmental agencies, and the public in identifying and evaluating the potential environmental consequences of the PGLWP, identifying measures to avoid or reduce adverse impacts, provide mitigation if necessary and examining feasible alternatives to the PGLWP.

The PGLWP Draft EIR, published on September 16, 2014, assessed the potential impacts of the PGLWP and alternatives. CEQA Guidelines (Section 15205(d)) requires a minimum 45-day review period for the Draft EIR. However, because the PGLWP involves a State Revolving Fund (SRF) Loan through the State Water Resources Control (SWRCB), which requires federal review through the "CEQA-Plus" process an additional six days is therefore added to the review period for mailing to federal agencies. Therefore, a total review period of 51-days was required for the PGWLP EIR. The review period of the PGLWP Draft EIR began on September 16, 2014, and ended on November 5, 2014. Comments on environmental issues evaluated in the Draft EIR were received from the public and state and local agencies during the review period. Federal agencies reviewing the project consult with and provide comments on the Draft EIR to the SWRCB Division of Clean Water Programs (Division). In addition, a public meeting to receive verbal comments on the Draft EIR was held on October 15, 2014.

CEQA Guidelines (Section 15088(b)) specify that the focus of the responses to comments is on the disposition of significant environmental issues. Some comments may address the merits of the project and other issues but do not pertain to the physical environmental effects. Responses to such comments, although not required by CEQA are included to provide additional information. The phrase, "The comment is acknowledged" is used when the EIR authors wish to acknowledge a comment that does not ask a question about the EIR, or does not challenge an element of, or conclusion of, the EIR.

The CEQA Guidelines (Section 15132) specify that the Final EIR consist of the following:

- The Draft Environmental Impact Report (Draft EIR or DEIR) or a revision of the Draft;
- Comments and recommendations received on the Draft EIR, either verbatim or in summary;
- A list of persons, organizations, and public agencies commenting on the Draft EIR;
- The responses of the Lead Agency to significant environmental points raised in the review and consultation process; and
- Any other information added by the Lead Agency.

Section 2 of this Final EIR, Comments and Responses to Comments on the Draft EIR, presents a table identifying those who submitted comments on the Draft EIR followed by the comment

letters and responses to significant environmental issues raised in the comments. Pursuant to CEQA Guidelines Section 15088, Evaluation of and Response to Comments,

> "(a) The lead agency shall evaluate comments on environmental issues received from persons who reviewed the draft EIR and shall prepare a written response. The Lead Agency shall respond to comments received during the noticed comment period and any extensions and may respond to late comments.
>
> (b) The lead agency shall provide a written proposed response to a public agency on comments made by that public agency at least 10 days prior to certifying an environmental impact report."

In compliance with Section 15088 (b), a letter was sent to each commenter that included a copy of the comment letter submitted on the PGLWP Draft EIR with a written response to each of the comment(s) provided. In addition, if a comment resulted in a change to the Draft EIR text, the text was revised and changes are presented in Section 3.

Section 3 consists of revisions to the Draft EIR. To assist the reader in identifying the revisions incorporated into the EIR, text changes use the following conventions:

- Text deleted from the EIR is shown in strikethrough text.
- Text added to the EIR is shown in underline text.

Revisions to the Draft EIR were made in response to comments contained in Section 2 of this Final EIR and are explained and set forth in the responses to those comments. Additional revisions correct typographical errors discovered in the text of the DEIR since publication or refine discussions and resolve internal inconsistencies. None of these additional, staff-initiated text changes alter or affect the conclusions reached by the Draft EIR as to the significance of environmental impacts. No revisions to the Draft EIR indicate that there are new or more severe environmental impacts than were evaluated and discussed in the Draft EIR, nor do they raise different feasible mitigation measures or alternatives that are not expected to be implemented by the City. The revisions merely clarify the contents of the Draft EIR.

Section 4 consists of the Mitigation Monitoring and Reporting Program (MMRP). CEQA requires the adoption of feasible mitigation measures to reduce the severity and magnitude of potentially significant environmental impacts associated with project development.

Monitoring of the implementation of adopted mitigation measures is required by Public Resources Code §21081.6. Following certification of the Final EIR and approval of this MMRP by the City, the mitigation measures included in the Final EIR will be implemented for each impact.

All project-specific mitigation measures included in the Final EIR will be monitored in accordance with this MMRP. Section 4 includes the MMRP Matrix, which includes all of the applicable mitigation and monitoring information for the proposed Project.

Section 5, Report Preparation, identifies those individuals involved with preparing this Final EIR. Exhibits reproduced in this document retain their original numbering as presented in the Draft EIR (Volumes 1 and II).

1.2 PROJECT SUMMARY

The PGLWP is located in the City of Pacific Grove, Monterey County, California (Figure 1-1, Project Location). The PGLWP study area is comprised of residential, office and commercial land uses, golf courses, recreational parks, schools, military installments, and open space reserves. The current population of the City is approximately 15,295 (US Census Bureau, 2011).

The goals of the PGWLP are:

- To preserve available potable water supplies for domestic uses and to maximize the recycling and reuse of non-potable recycled municipal wastewater in a cost-effective manner;
- To substitute the City's use of potable water purchased from the California American Water Company (CAW) with recycled water for non-potable water demands;
- To reduce discharges to Monterey Bay and the Pacific Grove Area of Special Biological Significance (ASBS);
- To maximize the use of existing wastewater collection, treatment, recycling and recycled water distribution infrastructure for the development of irrigation water and other non-potable demands.

The proposed Satellite Recycled Water Treatment Plant (SRWTP) site is located at the retired Point Pinos Wastewater Treatment Plant (PPWWTP) on the Pacific Grove Golf Links, south of Ocean View Boulevard (Figure 1-2, Project Vicinity). The retired Point Pinos WWTP is located adjacent to the 15th and 17th Tees of the Pacific Grove Golf Links, west of the intersection of Asilomar Avenue and Ocean View Boulevard, within the City of Pacific Grove in Monterey County (Figure 1-3, Proposed Site Plan). The retired Point Pinos WWTP is fenced and is surrounded by open space, pedestrian trails, the Monterey Bay to the north, dune habitat restoration to the west, and the Pacific Grove Golf Links to the south and east.

The PGLWP would produce and distribute high quality recycled water to replace potable water used for non-potable water demands. The PGLWP would recycle and reuse a portion of the wastewater generated within the City. Wastewater would be diverted from a gravity sewer in Asilomar Avenue that collects wastewater from the City's western-most sewershed[1]. Wastewater would be collected from existing sewer trunks and pipelines through a new diversion structure located in Asilomar Avenue. Diverted wastewater would be conveyed from this structure to the proposed SRWTP through a new 8-inch diameter, 1,300 foot long pipeline. The SRWTP would produce disinfected tertiary treated water, the highest grade of recycled water suitable for landscape irrigation described by the State of California in Title 22 Water Recycling Criteria, as defined in the California Code of Regulations (CCR) 60301.230 (California Department of Health Services, 2009). Following treatment at the proposed SRWTP, recycled water would be distributed through a new 8-inch diameter 2,800-foot long transmission pipelines to the Pacific Grove Golf Links and El Carmelo Cemetery.

[1] "Sewershed" means, for the purposes of this EIR, all the land area drained by a network of municipal sewer system conveyances to a single identifiable point.

The proposed Project is intended to serve approximately 125 acre-feet per year of recycled water primarily to the City of Pacific Grove Golf Links and El Carmelo Cemetery (Demand Group I). Future expansion of the PGLWP could include Demand Groups II (other sites within Pacific Grove) and Demand Group III (sites outside of the City, including the City of Monterey and Pebble Beach).

The PGLWP includes construction and operation of the following proposed new facilities as presented in Figure 1-4:

- *Wastewater Diversion:* wastewater diversion facilities, including the construction of a new diversion pipeline within an existing pipeline alignment to convey source water to the proposed new SRWTP.
- *Treatment Facilities:* a new SRWTP using membrane bioreactor (MBR) treatment technology, and associated facilities to filter, treat, and disinfect wastewater converting it to recycled water.
- *Recycled Water Storage and Distribution Facilities:* facilities consisting of the retrofit of two existing concrete tanks at Point Pinos, a new pump station, distribution pipelines, and appurtenant facilities to convey the recycled water to customers.
- *Waste Disposal Facilities*: facilities consisting of a new pump station and force main pipeline that would discharge waste activated sludge into the existing Monterey Regional Water Pollution Control Agency (MRWPCA) sewage collection facilities.
- *Replacement Potable Water Pipeline*: pipeline consisting of 1,100 feet of 1-inch diameter pipeline from Asilomar Avenue through the El Carmelo Cemetery to the cemetery maintenance building.
- *Future Facilities*: facilities consisting of expansion of both the SRWTP and the distribution system to provide recycled water to other non-potable demands throughout the City and other locations. These future facilities would be analyzed in greater detail at a later time when Demand Group II and III projects are developed.

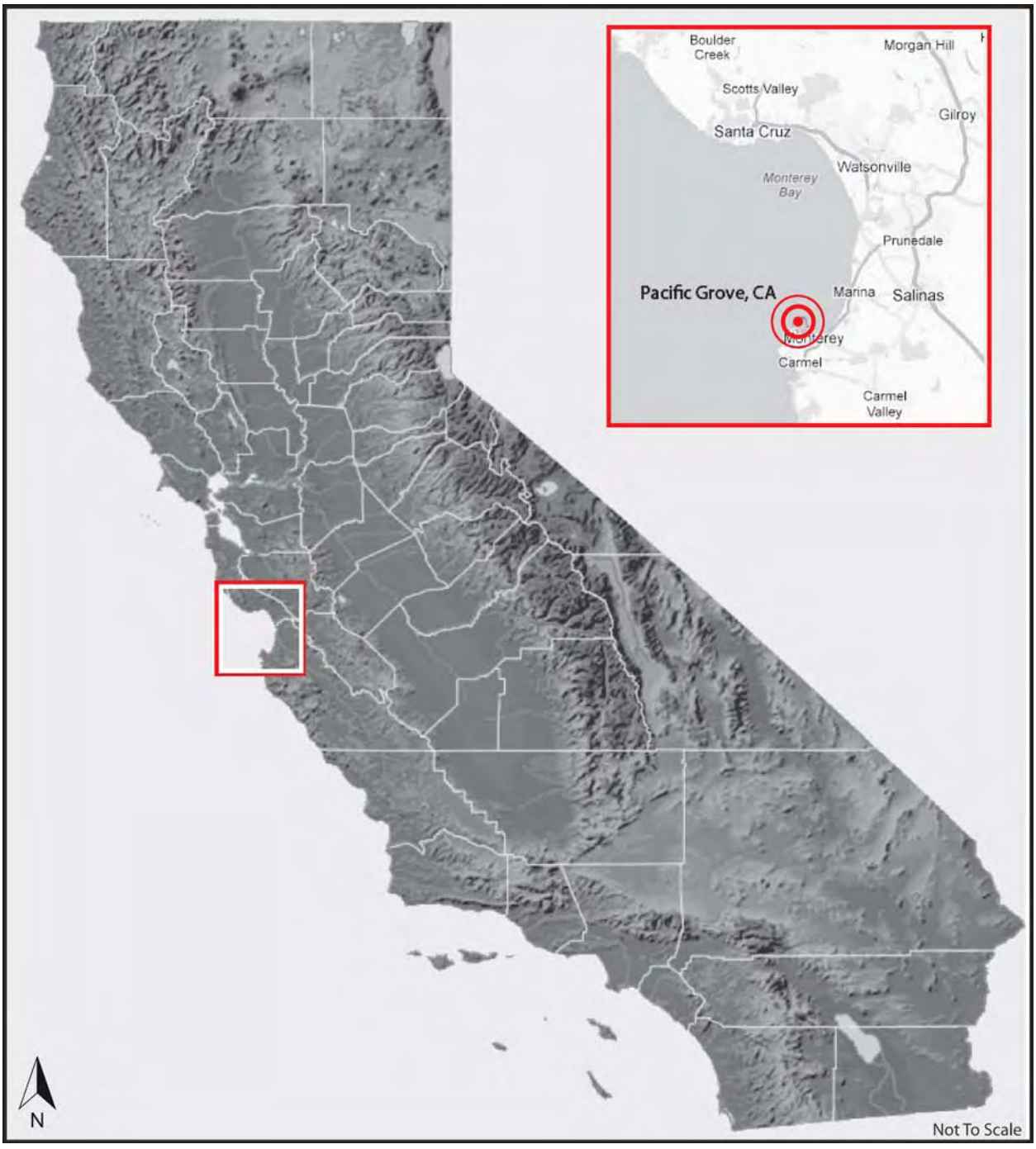

Figure 1-1: Project Location

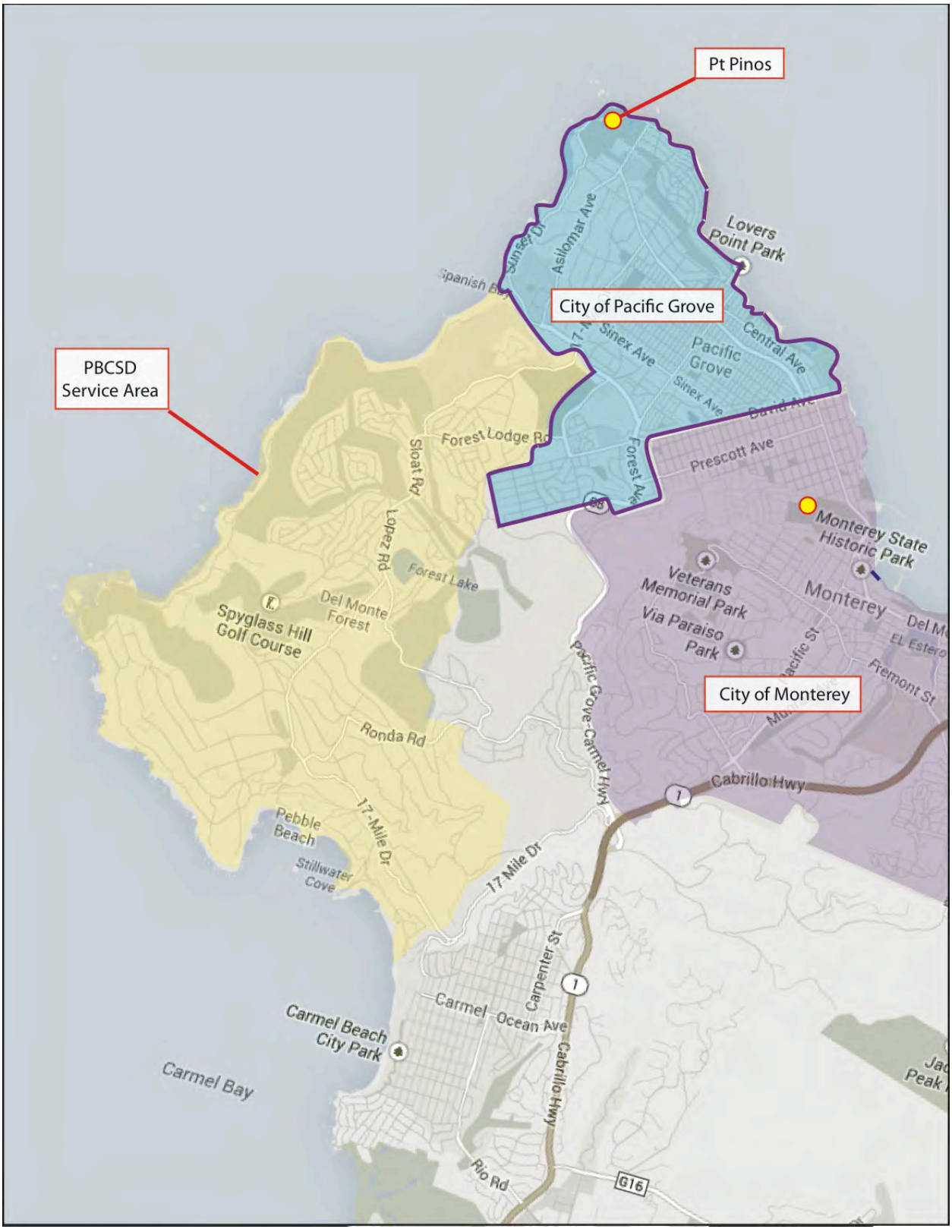

Figure 1-2: Project Vicinity

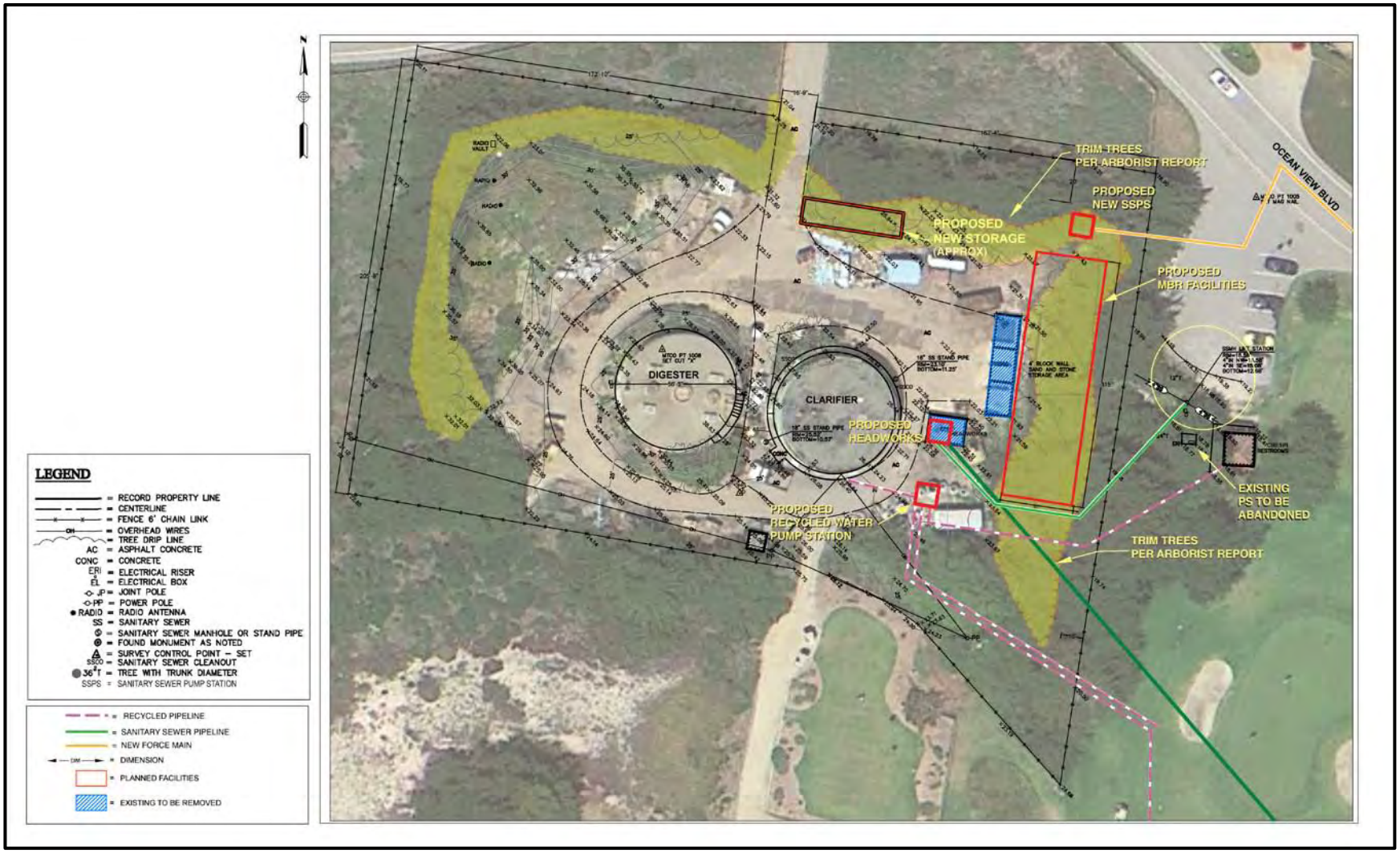

Figure 1-3: Proposed Site Plan

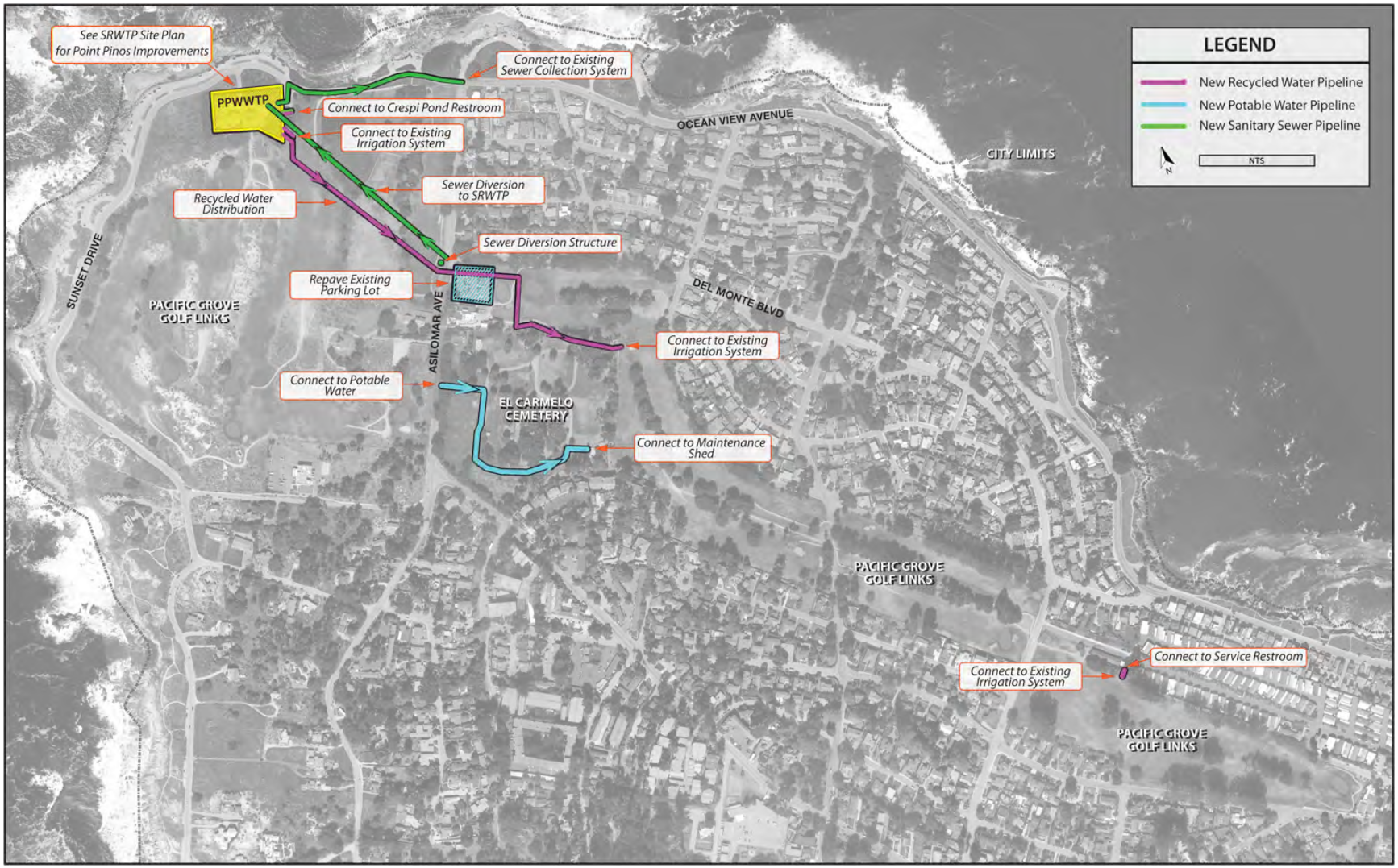

Figure 1-4: PGLWP Facilities Plan

SECTION 2.0 COMMENTS AND RESPONSES TO COMMENTS ON THE DRAFT EIR

2.1 INTRODUCTION AND OVERVIEW

Five comment letters were received during the public review period for the 2014 PGLWP Draft EIR. The review period ended on November 5, 2014. A public meeting to receive verbal comments on the DEIR was held on October 15, 2014. No comments were received at the meeting. The list of commenters is presented in Table 2-1. Each letter and comment has been assigned a letter/number designation for cross-referencing purposes. The comment letters and the responses to the substantive environmental issues raised in those letters are presented in Section 2.2.

Table 2-1

Comments Received on the Draft EIR

Letter	Commenter	Date	Page
A	John J. Olejnik, Associate Transportation Planner Department of Transportation State of California California State Transportation Agency	September 24, 2014	2-3
B	Karin Locke	October 29, 2014	2-4
C	Madeleine Flandreau, Environmental Scientist State Water Resources Control Board	October 31, 2014	2-6
D	Keith Israel, General Manager Monterey Regional Water Pollution Control Agency	November 4, 2014	2-18
E	Scott Morgan, Director California Governor's Office of Planning and Research, State Clearinghouse and Planning Unit	October 31, 2014	2-21

2.2 COMMENT LETTERS AND RESPONSES

A copy of each original comment letter received on the Draft EIR is presented in this section. Each comment letter is assigned an alphabetic identifier; within that letter, individual comments are assigned a combined alpha-numeric sequence to correspond to response to the comment. The alpha-numeric identifier is annotated on the comment letter in its right-hand margin. Responses to each comment are provided immediately following each comment letter. The sentence "The comment is acknowledged" is provided in those instance that a comment states an agency position or opinion and does not represent a comment on issues relevant to the environmental analysis presented in the Draft EIR. Where the response identifies an addition or deletion to the text, tables, or figures of the Draft EIR, the reader is directed to Section 3.0 Changes to the Draft EIR.

LETTER A: CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN J., Governor

DEPARTMENT OF TRANSPORTATION
50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3101
FAX (805) 549-3329
TTY 711
http://www.dot.ca.gov/dist05/

Serious drought. Help save water!

September 24, 2014

MON-68-1.12
SCH# 2014021058

Daniel Gho
Pacific Grove Public Works Department
300 Forest Avenue
Pacific Grove, CA 93950

Dear Mr. Gho:

COMMENTS TO PACIFIC GROVE LOCAL WATER PROJECT

The California Department of Transportation (Caltrans), District 5, Development Review, has reviewed the above referenced project and offers the following comments in response to your summary of impacts.

- Any work within the State right-of-way will require an encroachment permit issued from Caltrans. Detailed information such as complete drawings, biological and cultural resource findings, hydraulic calculations, environmental reports, traffic study, etc., may need to be submitted as part of the encroachment permit process. A-1

If you have any questions, or need further clarification on items discussed above, please don't hesitate to call me at (805) 542-4751.

Sincerely,

JOHN J. OLEJNIK
Associate Transportation Planner
District 5 Development Review Coordinator
john.olejnik@dot.ca.gov

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

Response to Comment A-1:

The comment is noted. The PGLWP does not include work within the State right-of-way. No further response is necessary.

LETTER B: KARIN LOCKE

From: Karin Locke <wisteriagma@comcast.net>
Date: October 29, 2014 8:19:25 PM PDT
To: Info@brezack.com
Cc: "Frutchey, Thomas" <tfrutchey@ci.pg.ca.us>, "Kampe, Bill" <bill@billkampe.org>, "Gho, Dan" <dgho@ci.pg.ca.us>, mbrodeur@cityofpacificgrove.org, aaziz@cityofpacificgrove.org
Subject: Comments for PG water project EIR

For the Draft EIR: for the City of Pacific Grove Water Projects.

Comment- Is the Pacific Grove Monarch Sanctuary, located on Ridge Rd in Pacific Grove a Demand location?

I would strongly recommend that the Pacific Grove Monarch Sanctuary be placed in the Demand Group I (along with the golf course and cemetery) as it is funded by a bond, a valuable asset and resource to be protected for the residents and important to the economic vitality of our city. See below agenda report for ordinance approval comments from 6/2014 which was passed with no opposition. This bond was initiated in 1990 so the residents have voted for and sustained it for over 24 years. In addition, the Monarch Sanctuary is noted as a valuable resource in Chapter 6 of our local Pacific Grove General Plan.

B-1

"On June 18, 2014 , the City Council introduced an ordinance that levies a tax rate of 0.003% on the assessed valuation of property in Pacific Grove, in order to pay for the annual debt service on the 2003 General Obligation Refunding Butterfly Habitat Bonds. No substantial changes to an ordinance can be made between its introduction and adoption, ***and there have not been any changes to this ordinance since it was introduced".***

Thank you,

Karin Locke

878 Bayview Ave
Pacific Grove CA 93950

Response to Comment B-1:

The water demand for the Pacific Grove Monarch Sanctuary has been identified in the Facilities Plan Report and in the DEIR as being a part of Demand Group II. Expansion of the proposed Project to service Demand Group II locations would occur as the City deems feasible. Future environmental and regulatory permitting analysis is required for expansion of the proposed SRWTP to serve Demand Groups II and III. Timing and approval for the future expansion of the proposed Project above 125 AFY would be determined by the City based upon the following considerations:

- Recycled water needs of the individual customers in Demand Groups II and III;
- Cost effectiveness of expanding the treatment capacity to produce more than 125 AFY of recycled water and to construct and operate additional recycled water distribution facilities from Point Pinos to the reuse customer sites in Demand Groups II and III; and
- Future coordination and the development of recycled water supply agreements with the customers that compose Demand Groups II and III. This would also coordination and approvals between the City and the potable water purveyors to Demand Groups II and III.

LETTER C: STATE WATER RESOURCES CONTROL BOARD

CALIFORNIA
Water Boards

Edmund G. Brown Jr.
GOVERNOR

Matthew Rodriguez
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

OCT 31 2014

Daniel Gho
City of Pacific Grove, Public Works Department
2100 Sunset Drive
Pacific Grove, CA 93950

Dear Mr.Gho:

ENVIRONMENTAL IMPACT REPORT (EIR) FOR CITY OF PACIFIC GROVE (CITY); PACIFIC GROVE LOCAL WATER PROJECT (PROJECT); MONTEREY COUNTY; STATE CLEARINGHOUSE NO. 2014021058

We understand that the City is pursuing Clean Water State Revolving Fund (CWSRF) financing for this Project. As a funding agency and a state agency with jurisdiction by law to preserve, enhance, and restore the quality of California's water resources, the State Water Resources Control Board (State Water Board) is providing the following information on the EIR to be prepared for the Project.

The State Water Board, Division of Financial Assistance, is responsible for administering the CWSRF Program. The primary purpose for the CWSRF Program is to implement the Clean Water Act and various state laws by providing financial assistance for wastewater treatment facilities necessary to prevent water pollution, recycle water, correct nonpoint source and storm drainage pollution problems, provide for estuary enhancement, and thereby protect and promote health, safety and welfare of the inhabitants of the state. The CWSRF Program provides low-interest funding equal to one-half of the most recent State General Obligation Bond Rates with a 30-year term. Applications are accepted and processed continuously. Please refer to the State Water Board's CWSRF website at:
www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/index.shtml.

The CWSRF Program is partially funded by the United States Environmental Protection Agency and requires additional "CEQA-Plus" environmental documentation and review. Three enclosures are included that further explain the CWSRF Program environmental review process and the additional federal requirements. For the complete environmental application package please visit:
http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/srf_forms.shtml. The State Water Board is required to consult directly with agencies responsible for implementing federal environmental laws and regulations. Any environmental issues raised by federal agencies or their representatives will need to be resolved prior to State Water Board approval of a CWSRF financing commitment for the proposed Project. For further information on the CWSRF Program, please contact Mr. Ahmad Kashkoli, at (916) 341-5855.

Felicia Marcus, Chair | Thomas Howard, Executive Director

1001 I Street, Sacramento, CA 95814 | Mailing Address: P.O. Box 100, Sacramento, CA 95812-0100 | www.waterboards.ca.gov

It is important to note that prior to a CWSRF financing commitment, projects are subject to provisions of the Federal Endangered Species Act (ESA), and must obtain Section 7 clearance from the United States Department of the Interior, Fish and Wildlife Service (USFWS), and/or the United States Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) for any potential effects to special-status species.

Please be advised that the State Water Board will consult with the USFWS, and/or the NMFS regarding all federal special-status species that the Project has the potential to impact if the Project is to be financed by the CWSRF Program. The City will need to identify whether the Project will involve any direct effects from construction activities, or indirect effects such as growth inducement, that may affect federally listed threatened, endangered, or candidate species that are known, or have a potential to occur in the Project site, in the surrounding areas, or in the service area, and to identify applicable conservation measures to reduce such effects. C-1

In addition, CWSRF projects must comply with federal laws pertaining to cultural resources, specifically Section 106 of the National Historic Preservation Act (Section 106). The State Water Board has responsibility for ensuring compliance with Section 106, and must consult directly with the California State Historic Preservation Officer (SHPO). SHPO consultation is initiated when sufficient information is provided by the CWSRF applicant. If the City decides to pursue CWSRF financing, please retain a consultant that meets the Secretary of the Interior's Professional Qualifications Standards (http://www.nps.gov/history/local-law/arch_stnds_9.htm) to prepare a Section 106 compliance report. C-2

Note that the City will need to identify the Area of Potential Effects (APE), including construction and staging areas, and the depth of any excavation. The APE is three-dimensional and includes all areas that may be affected by the Project. The APE includes the surface area and extends below ground to the depth of any Project excavations. The records search request should extend to a ¼-mile beyond project APE. The appropriate area varies for different projects but should be drawn large enough to provide information on what types of sites may exist in the vicinity. C-3

Other federal environmental requirements pertinent to the Project under the CWSRF Program include the following (for a complete list of all federal requirements please visit: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/docs/forms/application_environmental_package.pdf):

A. Compliance with the Federal Clean Air Act: (a) Provide air quality studies that may have been done for the Project; and (b) if the Project is in a nonattainment area or attainment area subject to a maintenance plan; (i) provide a summary of the estimated emissions (in tons per year) that are expected from both the construction and operation of the Project for each federal criteria pollutant in a nonattainment or maintenance area, and indicate if the nonattainment designation is moderate, serious, or severe (if applicable); (ii) if emissions are above the federal de minimis levels, but the Project is sized to meet only the needs of current population projections that are used in the approved State Implementation Plan for air quality, quantitatively indicate how the proposed capacity increase was calculated using population projections. C-4

B. Compliance with the Coastal Zone Management Act: Identify whether the Project is within a coastal zone and the status of any coordination with the California Coastal Commission. C-5

C. Protection of Wetlands: Identify any portion of the proposed Project area that should be evaluated for wetlands or United States waters delineation by the United States Army Corps of Engineers (USACE), or requires a permit from the USACE, and identify the status of coordination with the USACE. C-6

D. Compliance with the Farmland Protection Policy Act: Identify whether the Project will result in the conversion of farmland. State the status of farmland (Prime, Unique, or Local and Statewide Importance) in the Project area and determine if this area is under a Williamson Act Contract. C-7

E. Compliance with the Migratory Bird Treaty Act: List any birds protected under this act that may be impacted by the Project and identify conservation measures to minimize impacts. C-8

F. Compliance with the Flood Plain Management Act: Identify whether or not the Project is in a Flood Management Zone and include a copy of the Federal Emergency Management Agency flood zone maps for the area. C-9

G. Compliance with the Wild and Scenic Rivers Act: Identify whether or not any Wild and Scenic Rivers would be potentially impacted by the Project and include conservation measures to minimize such impacts. C-10

Following are specific comments on the City's draft EIR:

1. Please indicate the date of the USFWS and CNDDB records search on page 6-3. C-11

2a. Page 3 of the Archaeological Assessment (August 2013) in Appendix D states that the NWIC records search in the Office of Historic Preservation Properties Directory and the California Inventory of Historic Resources was conducted within a **0.25**-mi radius. The CWSRF Program requires a records search to extend to a **0.5** mile radius beyond the APE. C-12

2b. Appendix D includes a newer document called the Phase 1 Archaeological Survey (June 10, 2014). Please confirm the date of the records search and the records search radius completed in this survey and include them in Page 7-3 or 7-4 of the EIR. C-13

2c. Page 7-1 of the EIR states: "Fourteen sites, including twelve prehistoric and two historic age sites, have been identified within a 0.5-mi radius of the Area of Potential Effect." Due to the abundance of resources shown in Resource Maps #1 - #3 in the Phase 1 Archaeological Survey, please clarify the statement and correct it as needed. C-14

3. Page 7-1 of the EIR includes discussion of the Project APE. Please define the APE as three-dimensional in units of feet. C-15

4. The CWSRF Program requires all written correspondence with individuals on the Native American Contact List. Please include all responses and attach a phone log documenting voicemails and calls to these individuals on the contact list. C-16

5. Due to the presence of surface artifacts within multiple resource sites and the discovery of dietary remains in one of the two shovel tests in CA-MNT-127, the Project may have an unavoidable adverse impact on the environment. Mitigation measure 3 on page 7-8 of the EIR would not mitigate the Project's potential impact to cultural resources to an insignificant level since the disturbance to culturally sensitive areas would have already occurred if significant cultural materials or features were to be encountered. C-17

Please provide us with the following documents applicable to the proposed Project following the City's California Environmental Quality Act (CEQA) process: (1) one copy of the draft and final EIR, (2) the resolution certifying the EIR and making CEQA findings, (3) all comments received during the review period and the City's response to those comments, (4) the adopted Mitigation Monitoring and Reporting Program (MMRP), and (5) the Notice of Determination filed with the Monterey County Clerk and the Governor's Office of Planning and Research, State Clearinghouse. In addition, we would appreciate notices of any hearings or meetings held regarding environmental review of any projects to be funded by the State Water Board.

C-18

Thank you for the opportunity to review the City's draft EIR. If you have any questions or concerns, please feel free to contact me at (916) 327-9401, or by email at Madeleine.Flandreau@waterboards.ca.gov, or contact Ahmad Kashkoli at (916) 341-5855, or by email at Ahmad.Kashkoli@waterboards.ca.gov.

Sincerely,

Madeleine Flandreau
Environmental Scientist

Enclosures (3)

1. Clean Water State Revolving Fund Environmental Review Requirements
2. Quick Reference Guide to CEQA Requirements for State Revolving Fund Loans
3. Basic Criteria for Cultural Resources Reports

cc: State Clearinghouse
(Re: SCH# 2014021058)
P.O. Box 3044
Sacramento, CA 95812-3044

CLEAN WATER STATE REVOLVING FUND

California Environmental Quality Act Requirements

State Water Resources Control Board
Division of Financial Assistance

The State Water Resources Control Board (State Water Board), Division of Financial Assistance, administers the Clean Water State Revolving Fund (CWSRF) Program. The CWSRF Program is partially funded by grants from the United States Environmental Protection Agency. All applicants seeking CWSRF financing must comply with the California Environmental Quality Act (CEQA), and provide sufficient information so that the State Water Board can document compliance with federal environmental laws. The "Environmental Package" provides the forms and instructions needed to complete the environmental review requirements for CWSRF Program financing. It is available at:

http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/srf_forms.shtml

We've got the **green**...
to keep California's **water clean**.
CLEAN WATER STATE REVOLVING FUND

LEAD AGENCY

The applicant is usually the "Lead Agency" and must prepare and circulate an environmental document before approving a project. Only a public agency, such as a local, regional or state government, may be the "Lead Agency" under CEQA. If a project will be completed by a non-governmental organization, "Lead Agency" responsibility goes to the first public agency providing discretionary approval for the project.

RESPONSIBLE AGENCY

The State Water Board is generally a "Responsible Agency" under CEQA. As a "Responsible Agency," the State Water Board must make findings based on information provided by the "Lead Agency" before financing a project.

ENVIRONMENTAL REVIEW

The State Water Board's environmental review of the project's compliance with both CEQA and federal cross-cutting regulations must be completed before a project can be financed by the CWSRF Program.

DOCUMENT REVIEW

Applicants are encouraged to consult with State Water Board staff early during preparation of CEQA document if considering CWSRF financing. Applicants shall also send their environmental documents to the State Water Board, Environmental Review Unit during the CEQA public review period. This way, any environmental concerns can be addressed early in the process.

REQUIRED DOCUMENTS

The Environmental Review Unit requires the documents listed below to make findings and complete its environmental review. Once the State Water Board receives all the required documents and makes its own findings, the environmental review for the project will be complete.

- ✓ Draft and Final Environmental Documents: Environmental Impact Report, Negative Declaration, and Mitigated Negative Declaration as appropriate to the project
- ✓ Resolution adopting/certifying the environmental document, making CEQA findings, and approving the project
- ✓ All comments received during the public review period and the "Lead Agency's" responses to those comments
- ✓ Adopted Mitigation Monitoring and Reporting Plan, if applicable
- ✓ Date-stamped copy of the Notice of Determination or Notice of Exemption filed with the County Clerk(s) and the Governor's Office of Planning and Research
- ✓ CWSRF Evaluation Form for Environmental Review and Federal Coordination with supporting documents

Contact Information: For more information related to the CWSRF Program environmental review process and requirements, please contact your State Water Board Project Manager or Mr. Ahmad Kashkoli at 916-341-5855 or Ahmad.Kashkoli@waterboards.ca.gov

Water Boards
waterboards.ca.gov

REVISED FEB. 2014

CLEAN WATER STATE REVOLVING FUND

Basic Criteria for Cultural Resources Report Preparation

State Water Resources Control Board
Division of Financial Assistance

For Section 106 Consultation with the State Historic Preservation Officer (SHPO) under the National Historic Preservation Act

CULTURAL RESOURCES REPORT

The Cultural Resources Report must be prepared by a qualified researcher that meets the Secretary of the Interior's Professional Qualifications Standards. Please see the Professional Qualifications Standards at the following website at: *http://www.cr.nps.gov/local-law/arch_stnds_9.htm*

The Cultural Resources Report should include one of the four "findings" listed in Section 106. These include:

"No historic properties affected"
(no properties are within the area of potential effect (APE; including below the ground).

"No effect to historic properties"
(properties may be near the APE, but the project will not have any adverse effects).

"No adverse effect to historic properties"
(the project may affect "historic properties", but the effects will not be adverse).

"Adverse effect to historic properties"
Note: Consultation with the SHPO will be required if a "no adverse effect to historic properties" or an "adverse effect to historic properties" determination is made, to develop and evaluate alternatives or modifications to the proposed project that could avoid, minimize or mitigate adverse effects on "historic properties."

RECORDS SEARCH

- A records search (less than one year old) extending to a half-mile beyond the project APE from a geographically appropriate Information Center is required. The records search should include maps that show all recorded sites and surveys in relation to the APE for the proposed project, and copies of the confidential site records included as an appendix to the Cultural Resources Report.
- The APE is three-dimensional (depth, length and width) and all areas (e.g., new construction, easements, staging areas, and access roads) directly affected by the proposed project.

NATIVE AMERICAN and INTERESTED PARTY CONSULTATION

- Native American and interested party consultation should be initiated at the planning phase of the proposed project to gather information to assist with the preparation of an adequate Cultural Resources Report.
- The Native American Heritage Commission (NAHC) must be contacted to obtain documentation of a search of the Sacred Lands Files for or near the project APE.
- All local Native American tribal organizations or individuals identified by the NAHC must be contacted by certified mail, and the letter should include a map and a description of the proposed project.
- Follow-up contact should be made by telephone and a phone log maintained to document the contacts and responses.
- Letters of inquiry seeking historical information on the project area and local vicinity should be sent to local historical societies, preservation organizations, or individual members of the public with a demonstrated interest in the proposed project.

Copies of all documents mentioned above (project description, map, phone log and letters sent to the NAHC and Native American tribal organizations or individuals and interested parties) must be included in the Cultural Resources Report.

Contact Information: For more information related to the CWSRF Program Cultural Resources and Requirments, please contact Mr. Ahmad Kashkoli at 916-341-5855 or Ahmad.Kashkoli@waterboards.ca.gov

PRECAUTIONS

A finding of ***"no known resources"*** without supporting evidence is unacceptable. The Cultural Resources Report must identify resources within the APE or demonstrate with sufficient evidence that none are present.

"The area is sensitive for buried archaeological resources," followed by a statement that ***"monitoring is recommended."*** Monitoring is not an acceptable option without good-faith effort to demonstrate that no known resource is present.

If ***"the area is already disturbed by previous construction"*** documentation is still required to demonstrate that the proposed project will not affect "historic properties." An existing road can be protecting a buried archaeological deposit or may itself be a "historic property." Additionally, previous construction may have impacted an archaeological site that has not been previously documented.

SHPO CONSULTATION LETTER

Submit a draft consultation letter prepared by the qualified researcher with the Cultural Resources Report to the State Water Resources Control Board. A draft consultation letter template is available for download on the State Water Board webpage at: *http://www.waterboards.ca.gov/water_issues/programs/grants_loans/cwsrf_requirements.shtml*

Water Boards

waterboards.ca.gov

Response to Comment C-1:

The comment is noted. The proposed Project's compliance with Section 7 of the Federal ESA is addressed in Section 18.2.1 of this Final EIR.

Response to Comment C-2:

The comment is noted. The proposed Project's compliance with Section 106 of the NHPA is addressed in Section 18.2.3 of this Final EIR.

Response to Comment C-3:

The comment is noted. The proposed Project's compliance with Section 106 of the NHPA is addressed in Section 18.2.3 of this Final EIR. Also, please refer to RESPONSE to Comment C-13, below, for additional discussion regarding the proposed Projects APE.

Response to Comment C-4:

The comment is noted. The proposed Project's compliance with the Federal Clean Air Act is addressed in Section 18.2.4 of this Final EIR.

Response to Comment C-5:

The comment is noted. The proposed Project's compliance with the Coastal Zone Management Act is addressed in Section 18.2.5 of this Final EIR.

Response to Comment C-6:

The comment is noted. The proposed Project's compliance with Executive Order 11990, Protection of Wetlands, is addressed in Section 18.2.10 of this Final EIR.

Response to Comment C-7:

The comment is noted. The proposed Project's compliance with the Federal Farmland Protection Policy Act (FPPA) of 1981 is addressed in Section 18.2.7 of this Final EIR.

Response to Comment C-8:

The comment is noted. The proposed Project's compliance with the Migratory Bird Treaty Act (MBTA) is addressed in Section 18.2.9 of this Final EIR.

Response to Comment C-9:

The comment is noted. The proposed Project's compliance with the Floodplain Management – Executive Order 11988 is addressed in Section 18.2.8 of this Final EIR.

Response to Comment C-10:

The comment is noted. The proposed Project's compliance with the Wild and Scenic Rivers Act (16 USC Section 1271 et seq.) is addressed in Section 18.2.11 of this Final EIR.

Response to Comment C-11:

Appendix C-3, "Biological Resources Report", page 6 states the date of the DFW and CNDDB occurrence reports as "(DFW, 2014)". Page 17 of the report states the full reference: "DFW. 2014. California Natural Diversity DataBase Rare Find Report (May 2014)."

Response to Comment C-12:

The referenced "Archaeological Assessment (August 2013) in Appendix D" is more accurately titled on its lead sheet as Appendix D-1 "Preliminary Archaeological Resources Assessment". The purpose for conducting this preliminary survey was as a part of the Facilities Plan Rpeort. This preliminary review was more general by design to identify overall site suitability for the proposed Project and in supporting the planning analysis that was underway at that time.

Appendix D-2 of the DEIR consists of the "Phase I Archaeological Survey Report" (Doane and Breschini, 2014) was prepared to comply with the CWSRF Program requirements. As stated on page 4 and in its attachment A, "CHRIS Documentation" and the attached resource maps, all research was conducted within a 1 kilometer (0.62-mile) radius beyond the APE. Therefor, the records search conducted for the DEIR is consistent with the 0.5-mile radius beyond the APE.

Response to Comment C-13:

Appendix D-2 of the DEIR consist of the "Phase I Archaeological Survey Report" (Doane and Breschini, 2014). As stated on page 4 and in its attachment A, "CHRIS Documentation" and the attached resource maps, all research was conducted within a 1 kilometer (0.62-mile) radius beyond the APE. The date of the records search is May 19, 2014, as noted on the cover page of the attachment.

Response to Comment C-14:

The sentence in section 7-1 has a typographical error in it. The actual number of cultural resources within or immediately adjacent to the project APE is four, as properly indicated on page 4 of Appendix D-2 of the DEIR consist of the "Phase I Archaeological Survey Report" (Doane and Breschini, 2014).

Response to Comment C-15:

The APE for the proposed Project is defined as "the geographic areas within which an undertaking may directly or indirectly cause alternations in the character or use of the historic properties, if any such properties existing" (36 CFR 800.16[b]).

Depending upon the components of the proposed Project, the APE has been determined as the area of direct impact including areas of ground disturbance, staging areas, access, and work areas. Excavation for pipelines will include an area of direct impact for installation of the pipeline (component footprint) and a work area (construction boundary). Because the exact location of some pipelines have not yet been determined, an approximate construction width for pipelines has been delineated as the APE. The APE is summarized in the following table.

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	Construction Boundary (Feet)		Permanent Boundary (Feet)			Disturbed Volume (cubic feet)
Sewer Diversion Structure	8	8	8	8	6	384
8" Sewer Diversion Pipeline	1370	4	1370	4	5	27400
SRWTP Site Improvements	350	210	350	210	4	294000
Treatment Facilities						
Headworks						
MBR						
Disinfection						
New Sanitary Sewer Pump Station 15.5						
Tank Retrofit						
Recycled Water Pump Station						
New 6" Sanitary Sewer Force Main	1000	3	1000	3	5	15000
8" Recycled Water Pipeline	2800	4	2800	4	5	56000
1" Potable Water	1100	1	1100	1	5	5500

Response to Comment C-16:

A phone log documenting voicemails and calls to these individuals on the contact list is provided on the next page.

Copies of the correspondence with individuals on the Native American Contact List are provided in Attachment 2 to the "Phase I Archaeological Survey Report" (Doane and Breschini, 2014), Appendix D-3 of the DEIR (Native American Consultation).

ARCHAEOLOGICAL CONSULTING

P.O. BOX 3377
SALINAS, CA 93912
(831) 422-4912
Fax (831) 422-4913

November 6, 2014

Native American Phone log for AC 4966

All calls made by Mary Doane, project manager on June 9, 2014.

Jakki Kehl: (209) 892-1060. Voice mailbox is full. I was unable to leave a message.

Tony Cerda: (909) 524-8041. We discussed the project at some length. He has no objections to the project as long as due caution is observed and proper procedures are followed. He wishes notification of any positive findings.

Louise Miranda-Ramirez: (408) 629-5189. Responded by email. No phone contact was initiated.

Ramona Garibay: (510) 972-0645. I left voice mail to contact me with any information or concerns about the project.

Valentin Lopez: (916) 743-5833. Mr. Lopez declined to consult on this project because the project area in Pacific Grove is not in his tribal territory.

Irene Zwierlein: (650) 400-4806. Responded by email with daughter Michelle Zimmer. No phone call was made.

Christianne Arias: (831) 235-4590. I left voice mail to contact me with any information or concerns about the project.

Edward Ketchum: Responded by email to contact the Esselen Nation. No phone call was made, or could be made because no phone # is listed.

Pauline Martinez-Arias: (831) 596-9897. We discussed the project. She had no site-specific information. She is interested in any findings during the project.

Ann Marie Sayers: (831) 637-4238. I left voice mail to contact me with any information or concerns about the project.

Michelle Zimmer: (650) 851-7747. Responded by email with mother Irene Zwierlein. No phone call was made.

Response to Comment C-17:

The following additional mitigation measure has been developed for inclusion into the FEIR to avoid the potential for proposed Project to have a significant effect on cultural resources:

> The proposed Project will conduct a design develop process for ground disturbing activities that avoids effects to significant buried cultural resources. At approximately the 50% level of engineering design, the design team will coordinate with a qualified archeological monitor. The monitor will conduct sampling of proposed Project areas that would produce ground disturbances. Sampling will determine the presence of potentially significant cultural materials or features. Sampling results will be coordinated with the design tem who will develop modifications to the final design locations of the proposed Project features to ensure avoidance of impacts to cultural resources.

Response to Comment C-18:

The comment is noted.

LETTER D: MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY

Monterey Regional Water Pollution Control Agency

"Dedicated to meeting the wastewater and reclamation needs of our member agencies, while protecting the environment"

Administration Office:
5 Harris Court, Bldg. D, Monterey, CA 93940-5756
(831) 372-3367 or 422-1001, FAX: (831) 372-6178
Website: www.mrwpca.org

November 5, 2014

City of Pacific Grove
Attn: Mr. Daniel Gho, Superintendent Public Works
2100 Sunset Drive
Pacific Grove, CA 93950

Re: Comment Letter for the Pacific Grove Local Water Project Draft Environmental Impact Report

Dear Daniel,

On behalf of the Monterey Regional Water Pollution Control Agency (MRWPCA), we would like to provide our comments on the City of Pacific Grove's draft Environmental Impact Report (dEIR). The dEIR is currently open to public comment.

The MRWPCA has specific comments as it relates to two sections, 2.6 and 2.7. We also have one overall comment as it relates to communication between the agencies. In Section 2.7, (Pages 2-13 and 2-14) the Agency is unsure about our ability to accept the volume of waste activated sludge (WAS) from the proposed treatment plant. We need further information on the volume and concentration of such solids. This information would be needed to determine if odors, pipeline deposition and pluggage could occur. D-1

Related to this, there could be charges related to such materials being received in the MRWPCA wastewater system.

For Section 2.4 (Page 2-8), MRWPCA should be a coordinating entity. D-2

For Section 2.6 (Page 2-11), The Agency has concerns over the estimated flows coming from the wastewater system in Pacific Grove. Many communities in and around the Peninsula have seen a dramatic decrease in water use due to tiered water rates and increased conservation. Our research shows the flows from Pacific Grove could be as low as 0.7 MGD. Based on this data, we believe the flow estimates for the Asilomar area are overstated. D-3

The Agency's general comment is we would like to meet in the future to confirm the technical details of the Local Water Project. This would be helpful in verifying the ability to accept such sources into our system. If you have any questions, feel free to contact me. D-4

Sincerely,

Keith Israel, General Manager

Response to Comment D-1:
When operating at full design capacity of 0.25 million gallons per day, the proposed Project would generate approximately 305 pounds per day (lbs/day) of Waste Activated Sludge (WAS) at a rate of approximately 3,889 gallons per day (gpd).

Raw sewage from domestic origins has a generally accepted solids contraction of 0.1%. Therefore, sewage that currently flows to the Coral Street Pump Station is expected to consist of an estimated 99.9% liquid fraction. The solids concentration of the WAS produced by the proposed Project would be approximately 0.9%. Therefore, the proposed Project would discharge WAS at a concentration of approximately 99.0% liquid.

The waste activate sludge would be pumped from the proposed Project and discharged to the City's gravity sewage collection system at MH 982 located at the intersection of Ocean View Boulevard and Asilomar Avenue where it would be conveyed by gravity in a 15-inch pipeline to the MRWPCA Coral Street Pump Station and eventually to MRWPCA's Monterey Interceptor Pipelines for treatment at the MRWPCA RTP. The WAS flows can be accommodated within the City's existing 15-inch gravity pipeline and at the MRPWCA Coral Street Pump Station. The Coral Street Pump Station has a design capacity of 3.8 million gallons per day (mgd), and an existing average dry weather flow of 0.6 mgd. MRWPCA facilities have sufficient capacity to convey the waste activated sludge from the proposed Project.

The new force main and existing gravity pipeline would be owned, operated and maintained by the City of Pacific Grove. Therefore, maintenance requirements of the WAS portions of the proposed Project would be closely monitored and operated by the City. If solids deposition were to occur, the City would be responsible for sewer pipeline flushing as currently occurs and as described in its Sewer System Management Plan. Additionally, the City would modify its operations of the recycling and WAS disposal facilities to minimize solids deposition.

The volatile fraction of the waste solids would be approximately 75%. The waste activated sludge is expected to have characteristics presented in Table 1. No detectable increases in odor would result from the proposed Project.

Table 1 - WAS Discharge Quality

Parameter	WAS Limit
BOD	<5.0 mg/l
TSS	<5.0 mg/l
Ammonia	<0.5 mg/l

The WAS quantity and quality would not have any negative impacts to current infrastructure capacity or treatment facilities at the MRWPCA RTP. The City would coordinate with MRWPCA on the need to apply for an industrial discharge permit from MRWPCA for the discharge of WAS from the proposed Project.

Therefore, issues of increased odors, solids deposition, or pipeline pluggage would not occur.

Response to Comment D-2:
Section 2.4 of the DEIR has been revised as follows:

> The City is coordinating with CAW, Monterey Peninsula Water Management District (MPWMD), Monterey Regional Water Pollution Control Agency (MRWPCA), Pebble Beach Community Services District (PBCSD), and other public agency stakeholders in implementing the PGLWP. The PGLWP would be designed, constructed and operated in compliance with applicable regulatory requirements to ensure the protection of the public health and of the environment.

Response to Comment D-3:
The comment is noted. Sewer flow estimates are based upon recent flow monitoring studies completed by the City in 2013 as a part of its comprehensive Sewer Master Plan Project (Wallace, 2013). The City would continue to monitor flows in the Asilomar Boulevard sewer with flow metering equipment as part of the proposed diversion structure.

Response to Comment D-4:
The comment is noted. The City appreciates the continued collaboration with MRWPCA on the proposed Project. The City and MRWPCA previously met on May 31, 2013 and on March 13, 2014 regarding the proposed Project, and plan on continuing communications throughout the design, construction, and implementation process.

LETTER E: CALIFORNIA GOVERNOR'S OFFICE OF PLANNING AND RESEARCH, STATE CLEARINGHOUSE AND PLANNING UNIT

STATE OF CALIFORNIA

GOVERNOR'S OFFICE of PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

October 31, 2014

Daniel Gho
City of Pacific Grove, Public Works Dept.
2100 Sunset Drive
Pacific Grove, CA 93950

Subject: Pacific Grove Local Water Project (PGLWP)
SCH#: 2014021058

Dear Daniel Gho:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on October 30, 2014, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. E-1

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH#	2014021058
Project Title	Pacific Grove Local Water Project (PGLWP)
Lead Agency	Pacific Grove, City of
Type	EIR Draft EIR
Description	The primary goal of the proposed project is to create a new supply of non-potable water for irrigation of the Pacific Grove Municipal Golf Links, the El Carmelo Cemetery and other irrigation locations and for other uses of recycled water as permitted in the State of CA to substitute recycled water where potable water is currently being used. A new satellite recycled water treatment plant would be built, along with the installation of 2,800 linear feet of 8-inch recycled water pipeline.

Lead Agency Contact

Name	Daniel Gho
Agency	City of Pacific Grove, Public Works Dept.
Phone	831 375 0627 Fax
email	
Address	2100 Sunset Drive
City	Pacific Grove State CA Zip 93950

Project Location

County	Monterey
City	Pacific Grove
Region	
Lat / Long	36° 38' 11" N / 121° 56' 4" W
Cross Streets	Asilomar Avenue and Ocean View Blvd
Parcel No.	007-011-003
Township	Range Section Base

Proximity to:

Highways	
Airports	
Railways	
Waterways	Pacific Ocean
Schools	Down Elm, PG HS & MS
Land Use	Pacific Grove Water Treatment Plant/Open Space/ Institutional
Project Issues	Archaeologic-Historic; Biological Resources; Coastal Zone; Drainage/Absorption; Geologic/Seismic; Noise; Public Services; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply; Landuse; Aesthetic/Visual; Air Quality; Flood Plain/Flooding; Sewer Capacity; Vegetation; Cumulative Effects
Reviewing Agencies	Resources Agency; California Coastal Commission; Department of Conservation; Department of Fish and Wildlife, Region 4; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Caltrans, District 5; Air Resources Board; State Water Resources Control Board, Divison of Financial Assistance; State Water Resources Control Board, Division of Water Rights; Regional Water Quality Control Board, Region 3; Native American Heritage Commission; State Lands Commission
Date Received	09/16/2014 Start of Review 09/16/2014 End of Review 10/30/2014

Response to Comment E-1:
The comment is noted.

SECTION 3.0 CHANGES TO THE DRAFT EIR

3.1 INTRODUCTION

The following section provides revisions to the text, figures, or tables of the Draft EIR, in an amendment form. All additions to the text are presented in underline, and all deletions are in ~~strikethrough~~.

3.2 CORRECTIONS AND REVISIONS

3.1.1 Section S Summary

Page S-2, Item Number 6, first sentence should be revised as follows:

> 6. The PGLWP would be the first of the four primary Projects designed to prevent illegal diversions from the Carmel River and excessive pumping from the Seaside Aquifer to come on line.

Page S-14. The following rows should be inserted in Table S-1 Summary of Significant Environmental Impacts, Mitigation Measures, and Determination of Impacts After Mitigation Has Been Applied.

Impact	Mitigation Measure
Cultural Resources	
Impact Cultural Resources 1: Construction of the new facilities associated with the PGLWP may cause adverse change in the significance of a historical resource.	**Cultural Resources Mitigation Measure 1:** The proposed Project will conduct a design development process for ground disturbing activities that avoids effects to significant buried cultural resources. At approximately the 50% level of engineering design, the design team will coordinate with a qualified professional archeologist, who will conduct sampling of project areas that would be subject to ground disturbances near recorded archaeological sites. Sampling will determine the presence/absence of potentially significant cultural materials. Sampling results will be coordinated with the design team who will develop modifications to the design of the proposed Project features to ensure avoidance of impacts to cultural resources. All redesign based on sampling results will be reviewed by the project archaeologist.
Impact Cultural Resources 1: Construction of the new facilities associated with the PGLWP may cause adverse change in the significance of a historical resource.	**Cultural Resources Mitigation Measure 2:** A qualified archaeological monitor would be present during all Project excavations in the SRWTP, for the Ocean View Boulevard sanitary sewer pipeline, for the sewer pipeline and recycled water pipes between the SRWTP and Asilomar Avenue, and in El Carmelo Cemetery. The monitor would document and recover any potentially significant cultural materials that may be found in the excavated soil. If it is determined by the archaeological monitor that cultural materials existing in the excavated soil, excavated soil may be screened to assist in such data recovery.
Impact Cultural Resources 1: Construction of the new facilities associated with the PGLWP may cause adverse change in the significance of a historical resource.	**Cultural Resources Mitigation Measure 3:** If, at any time, previously undisturbed midden containing potentially significant cultural materials or features is encountered, work shall be halted until the monitor and/or the principal archaeologist have evaluated the discovery. If the find is determined to be significant, appropriate data recovery mitigation shall be developed and implemented with the concurrence of the City.
Impact Cultural Resources 2: Construction of the new facilities associated with the PGLWP may cause change in the significance of an archaeological resource.	**Cultural Resources Mitigation Measure 1-3:** (See above)
Impact Cultural Resources 3: Construction of the new facilities associated with the PGLWP may damage a unique paleontological resource or site or unique geologic feature.	**Cultural Resources Mitigation Measure 1-3:** (See above)
Impact Cultural Resources 4: Construction of the new facilities associated with the PGLWP may disturb human remains, including those interred outside of formal cemeteries.	**Cultural Resources Mitigation Measure 4:** If archaeological resources or human remains are unexpectedly discovered during construction, work shall be halted on the Project parcel until a qualified professional archaeologist can evaluate the find. If the find is determined to be significant, appropriate mitigation measures shall be formulated, with the approval of the lead agency, and implemented.

3.1.2 Section S Summary

Page S-22. The following Section S.6 should be inserted after Section S-5 Summary of Impacts and Mitigation Measures.

S.6 AREAS OF KNOWN CONTROVERSY / ISSUES TO BE RESOLVED

CEQA Guidelines Section 15123 requires that Areas of Known Controversy identified by the public or other agencies and Issues to be Resolved be summarized in an EIR.

Areas of Known Controversy

The following areas of concern have been raised through the scoping process and were incorporated into the environmental analysis:

- None

Issues to be Resolved

The following issues need to be resolved as part of the project evaluation and adoption process:

- None

3.1.3 Section 2.0 Project Description

Page 2-2, Section 2.3 Project Location and Site Description, Paragraph 1 is revised as follows:

> The Demand Group I Project is located in the City of Pacific Grove, Monterey County, California (Figure 2-1, ~~Program Vicinity~~ Project Location).

3.1.4 Section 2.0 Project Description

Page 2-8, Section 2.4 Project Description, Paragraph 3 is revised as follows:

> The City is coordinating with CAW, Monterey Peninsula Water Management District (MPWMD), Pebble Beach Community Services District (PBCSD), Monterey Regional Water Pollution Control Agency (MRPWCA), and other public agency stakeholders in implementing the PGLWP.

3.1.5 Section 7.0 Cultural Resources

Pages 7-7 – 7-8 are revised as follows:

Impacts and Mitigation Measures

This section identifies the potentially significant adverse project-level, program-level, and cumulative impacts and required mitigation measures for the proposed Project. Detailed evaluations of the impacts of the proposed Project (Demand Group I) are addressed in the project-level analysis below. The program-level analysis is prepared for Demand Groups II and III. This program-level analysis is not intended to describe or address the impacts in detail; detailed evaluations of the impacts of specific projects would be conducted as part of future site-specific CEQA review.

Impact 7-1: Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

Impact 7-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Impact 7-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or

Impact 7-4: Disturb any human remains, including those interred outside of formal cemeteries.

Project-Level Impact Analysis

Portions of the Project APE, which lie along the recorded southern boundaries of archaeological sites CA-MNT-125 and CA-MNT-127 and near the recorded northern boundary of site CA-MNT-128, contain sparse surface evidence of those cultural resources in largely disturbed contexts. Previous radiocarbon dating has placed two of these sites, CA-MNT-125 and CA-MNT-127, within the Late Period of Prehistoric Occupation. Site CA-MNT-128 has been subject to no testing or data recovery mitigation previously. The remainder of the APE does not contain surface evidence of significant historic resources. Excavations within those portions of the APE would have **no effect** on significant historic/cultural resources.

The current paved environment precludes further examination of the APE under Ocean View Boulevard and the portions of the sewer treatment facility that would be subject to direct Project impacts. Previous sewer trenching, sewer facility development, road grading and golf course development has caused significant previous disturbance in portions of the Project APE nearest to the identified archaeological sites. Nevertheless, remnants of undisturbed archaeological soil associated with the archaeological sites may remain in and/or near the Project APE. Therefore, installation of the SRWTP and appurtenances within the APE could result in **a potentially significant impact.**

Project-Level Mitigation Measures

~~1. The City of Pacific Grove would perform an extended Phase 1 survey to determine the presence/absence of site CA-MNT-128 within the sewer and recycled water alignment APE in the golf course between Asilomar Avenue and the SRWTP. This subsurface survey most likely would involve augering the length of the sewer and recycled water pipeline alignment APE through the golf course between Asilomar Avenue and the SRWTP. All recommendations contained in the extended Phase 1 survey would be implemented by the City.~~

1. The proposed Project will conduct a design develop process for ground disturbing activities that avoids effects to significant buried cultural resources. At approximately the 50% level of engineering design, the design team will coordinate with a qualified archeological monitor. The monitor will conduct sampling of proposed Project areas that would produce ground disturbances. Sampling will determine the presence of potentially significant cultural materials or features. Sampling results will be coordinated with the design team who will

develop modifications to the design of the proposed Project features to ensure avoidance of impacts to cultural resources.

2. A qualified archaeological monitor would be present during all Project excavations in the SRWTP, for the Ocean View Boulevard sanitary sewer pipeline, for the sewer pipeline and recycled water pipes between the SRWTP and Asilomar Avenue, and in El Carmelo Cemetery. The monitor would document and recover any potentially significant cultural materials that may be found in the excavated soil. If it is determined by the archaeological monitor, excavated soil may be screened to assist in such data recovery.

3. If, at any time, previously undisturbed midden containing potentially significant cultural materials or features is encountered, work shall be halted until the monitor and/or the principal archaeologist have evaluated the discovery. If the find is determined to be significant, an appropriate data recovery mitigation shall be developed and implemented with the concurrence of the Lead Agency.

Because of the possibility of unidentified (e.g., buried) cultural resources being found during any ground-breaking or construction activity, the following standard language be included in any permits issued for the Project area:

4. If archaeological resources or human remains are unexpectedly discovered during construction, work shall be halted on the Project parcel until it can be evaluated by a qualified professional archaeologist. If the find is determined to be significant, appropriate mitigation measures shall be formulated, with the approval of the lead agency, and implemented.

Significance after mitigation: Less than significant.

3.1.6 Section 10.0 Hazards and Hazardous Materials

Page 10-16, Section 10.4 Impacts and Mitigation Measures, Paragraph 6 is revised as follows:

During the operation of the proposed SRWTP, ~~suspended solids~~ primary screenings would be filtered out of the municipal sewage.

3.1.7 Section 15.0 Utilities and Service Systems

Page 15-10, Section 15.5 Impacts and Mitigation Analysis, Paragraph 3 is revised as follows:

The potentially significant impact associated with potential damage to or interference with public utilities would be **less than significant** with the implementation of Mitigation Measures Utilities and Service Systems ~~through~~ 15-1 through 15-~~x 9~~.

3.1.8 Section 17.0 Alternatives

Page 17-1, Section 17.2 Project Goals and Objectives, Paragraph 1, Bullet 2 should be revised as follows:

- To substitute the City's use of California American Water Company (CAW)~~CAW~~ potable water with recycled water for non-potable water demands.

3.1.9 Section 18.0 CEQA-Plus Compliance

Page 18-1. The following Section 18.2 should be inserted after Section 18.1 Introduction.

18.2 CEQA-PLUS COMPLIANCE

18.2.1 Federal Endangered Species Act (ESA), Section 7

Pursuant to the Federal ESA (PL 93-205), the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have regulatory authority over federally listed species. Under ESA, a permit to "take" a listed species is required for any Federal action that may harm an individual of that species. Take is defined under ESA Section 9 as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Under Federal regulation, take is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. ESA Section 7 outlines procedures for Federal interagency cooperation to conserve federally listed species and designated critical habitat. Section 7(a)(2) requires Federal agencies to consult with USFWS and/or NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species.

As discussed in Section 6.0, "Biological Resources," of the Draft EIR, the PGLWP could result in harm, injury, or death of individual birds, or abandonment of an active nest within the Monterey cypress trees surrounding the site (Impacts 6-1 and 6-2). However, implementation of Mitigation Measure 1 would reduce any potential proposed Project impacts on individual birds or active nests to a less-than-significant level. Additionally, potential impacts to Monterey cypress trees could occur (Impact 6-3) but potential impacts would be reduced to a less-than-significant level by implementation of Mitigation Measure 2.

As stated in Section 6.6.1, Impacts to Special-Status Plant and Animal Species, the Project site contains Monterey cypress trees along its boundary. Native Monterey cypress is a California Native Plant Society (CNPS) List 1B.2 plant, which is treated as special-status species in accordance with CEQA Guidelines Section 15380. Only two native stands of Monterey cypress are found on the Monterey Peninsula, located at Point Lobos and Pebble Beach. All other stands of Monterey cypress, including those that were identified surrounding the Project site, are assumed to have been planted as landscape trees. Therefore, the Monterey cypress located at the proposed Project site would not be classified as a special-status plant species. As such, the impact to special-status plants species is considered less-than-significant. Monterey cypress is protected under the Pacific Grove Municipal Code (PGMC) and is discussed in detail, above, under Biological Mitigation Measure 2. No other special status plant species exist on the proposed Project site or within the pipeline corridors that would serve Demand Groups II and III. In addition, no special status animal species, either terrestrial or aquatic, exist on the proposed Project site or within the pipeline corridors that would serve Demand

Groups II and III. Project-specific biological assessments would be prepared for any subsequent portion of the project to serve Demand Groups II or III.

18.2.2 Magnuson-Stevens Fishery Conservation and Management Act, Essential Fish Habitat (EFH)

The SWRCB Division of Financial Assistance (Division) is the designated non-federal representative under the Magnuson-Stevens Fishery Conservation and Management Act for projects that involve a SRF loan. EFH and Receiving Waters would not be impacted by the proposed Project. EFH consultations are required only for actions that may adversely affect EFH.

The United States Department of the Interior, USFWS and the United States Department of Commerce National Oceanic and Atmospheric Administration (NOAA), and NMFS must be consulted for any project that will have the potential to adversely impact a federal special-status species. The EPA delegated the SWRCB to act as the non-federal lead for initiating informal Section 7 ESA consultation with the USFWS. The SWRCB will coordinate with the EPA for projects requiring formal Section 7 ESA consultation with the USFWS and projects that will impact federal special-status fish species under the NMFS jurisdiction.

EFH are waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity. The Magnuson-Stevens Fishery Conservation and Management Act, as amended, is designed to manage and conserve national fishery resources. A determination as to whether the proposed project involves any direct effects from construction activities, or indirect effects such as growth inducement that may adversely affect essential fish habitat is therefore required. NMFS is responsible for publishing maps and other information on the locations of designated EFH.

The Water Quality Control Plan for Ocean Waters of California (Ocean Plan) establishes water quality objectives and beneficial uses for waters of the Pacific Ocean adjacent to the California Coast. The plan establishes effluent quality requirements and management principles for specific waste discharges. The water quality requirements and objectives are incorporated into all NPDES permits. The Ocean Plan objectives relevant to the PGLWP include:

- Marine communities, including vertebrate, invertebrate, and plant species shall not be degraded;
- Waste management systems that discharge into the ocean must be designed and operated in a manner that will maintain indigenous marine life and a healthy and diverse marine community;
- Waste discharged to the ocean must be essentially free of substances that will accumulate to toxic levels in marine waters, sediments, or biota
- The Ocean Plan establishes objectives for many bacterial, physical, chemical, biological and radioactive parameters.

Wastewater flows from the City of Pacific Grove to the MRWPCA RTP located in Marina. The RTP outfall is located just west of the RTP in the Monterey Bay.

Monterey Bay is designated as a National Marine Sanctuary. The termination of the outfall is outside the National Marine Sanctuary Zone of Prohibition (Central Coast Regional Water Quality Control Board 2014).

Numerous legacy and currently used pesticides (such as dieldrin, DDTs, pesticides, polynuclear aromatic hydrocarbon (PAHs), PCBs), and bacteria are found in Monterey Bay. The largest sources of the contaminants are from agricultural runoff into the San Lorenzo, Pajaro, Salinas, and Carmel rivers. Seasonal data, collected by the Central Coast Long-term Environmental Assessment Network (CCLEAN), demonstrate that most of the contaminants wash into Monterey Bay during the wet season when the river flows are the greatest (CCLEAN, 2007). Nearshore waters exceeded the California Ocean Plan standards for PCBs and have been listed "impaired".

The RTP outfall is regulated by the Central Coast Regional Water Quality Control Board's National Pollution Discharge Elimination System (NPDES) permit # CA0048551, effective August 1, 2014, pursuant to Board Order R3-2014-0013. This NPDES permit addresses water quality requirements for treated municipal wastewater and stormwaters. The permit is for an average dry weather flow capacity of 29.6 mgd and peak wet weather flow of 75.6 mgd. The minimum dilution requirement is 145:1 parts seawater to effluent. It contains Receiving Water Limitations that are based on effluent limitations and water quality objectives (Water-Contact Standards) pursuant to the California Ocean Plan and Basin Plan. This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare and endangered species. Table 5 of the Board Order "Effluent Limitations for the Protection of Marine Aquatic Life" establishes the effluent limits and monitoring and reporting requirements related to protection of aquatic species. The discharger is responsible for meeting all applicable requirements of the Endangered Species Act. These limitations and water quality objectives ensure that receiving waters are not impaired.

The monthly effluent flow from the RTP outfall into the Pacific Ocean and receiving waters ranges from 19.8 mgd in the winter to 0.1 mgd in the summer, as flows in the summer are diverted to the Castroville Seawater Intrusion Project (CSIP). No wastewater is discharged into the Pacific Ocean at Point Pinos.

The average annual wastewater flow into the RTP from the City of Pacific Grove currently is 1.327 mgd (Wallace Group 2013). Therefore, the City's overall wastewater contribution to current total wastewater flows received at the RTP is equivalent to approximately 7% of the total. More than 93% of the wastewater flows to the RTP are from sources other than the City of Pacific Grove. The City's contribution to RTP discharge into receiving waters is therefore also 7% of the total flow.

The high biological productivity of Monterey Bay and adjacent waters supports numerous protected species of mammals, birds, turtles and fishes. Special status mammals likely to occur in the Monterey Bay near the RTP outfall discharge location include the Southern Sea Otter and Humpback whale. Stellar Sea Lion, Guadalupe Fur Seal, and Blue Whale are not likely to be seen in the project area, but may occur seasonally in Monterey Bay. The Fin Whale, Sperm Whale, North Pacific Right Whale, and Sei Whale are unlikely to be present in the project area, but are seasonally

seen farther offshore in Monterey Bay. Species also seen can include the California Sea Lion, Harbor Seal, Elephant Seal and Grey Whale. The special status marine birds and those protected under the Migratory Bird Act that are possible to occur in the project area include the California Brown Pelican, Western Snowy Plover, and Marbles Murrlete. Special status marine turtles that have a probability of occurring seasonally in the project area include the Leatherback Sea Turtle, Green Sea Turtle, Olive Ridley Sea Turtle, and Loggerhead Sea Turtle. The Leatherback Sea Turtle is federally endangered and most commonly seen in Monterey Bay from July to October. The other turtles are federally threatened species and rarely seen in Monterey Bay. The special status fish that could occur seasonally in the project area include the Chinook Salon, Coho Salmon, Steelhead Trout, Green Sturgeon, and Tidewater Goby.

The immediate area of the discharge surrounding the RTP outfall has been described as a high-energy sandflat in south-central Monterey Bay. The outfall extends approximately 11,300 feet from the shore to a depth of 100 feet below the ocean's surface. The end of the outfall lies approximately 3 miles southwest of the mouth of the Salinas River and is within the area affected by the sediment plume from the river (ABA Consultants, 1999). The long term monitoring study of the ocean outfall reported effects from the outfall discharge on benthic communities, the biological accumulation of contaminants in animal tissue, and observations of the physical and chemical properties of the sediments and water column except areas close to the discharge (ABA Consultants, 1999).

A community of polychaetes has formed a distinct band within two meters along the south side of the outfall resulting in a small "artificial reef-like" community that utilizes the increased sediment stability provided by the outfall pipe increasing the diversity and abundance of organisms near the outfall (ABA Consultants, 1999). The monitoring program also reported that the benthic community structures within the study area had shifted over time with a general increase in mobile epifuna and opportunistic species and a decrease in sessile species and predators, consistent with patterns seen in other parts of Monterey Bay and not linked to the outfall itself (ABA Consultants, 1999)

Areas of Monterey Bay are identified as EFH for various life stages of marine and estuarine fish species (e.g. various rockfishes, flatfishes, sharks, northern anchovy, Pacific Sardine, Chinook salmon, Coho salmon) managed by federal Fishery Management Plan. The EFH Conservation Area is located approximately 5 miles offshore of the coastline in the City of Marina. The RTP outfall discharge point is approximately 3 miles offshore. The RTP outfall is not within the EFH Conservation Area.

Construction activities of the proposed Project would not produce any effects on EFH. The proposed Project would be subject to the City of Pacific Groves "storm water management and discharge control ordinance". [Ord. 07-002 § 2, 2007]. (c) The City's BMP guidance series requires that include best management practices be included to reduce pollutants in any storm water runoff from construction activities. The City may incorporate BMPs and other requirements in any land use entitlement and construction or building-related permit issued relating to such development or redevelopment. The owner and operator shall comply with the terms, provisions, and conditions of such land use entitlements and building permits and as required by this chapter.

Construction activities subject to BMP requirements shall continuously employ measures to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality, contamination, or unauthorized discharge of pollutants.

Best Management Practices for construction storm water requirements would be implemented and any potential construction related effects would therefore be fully mitigated

Implementing the PGLWP would result in a reduction of the total flows to the RTP by 0.11 mgd, less than 1% of the total flow, (from 1.327 to 1.217 mgd). Dry and wet weather stormwater flows of 0.13 mgd (Fall Creek Engineering 2013) may also be conveyed to the RTP, presenting a net increase of flows to the RTP of 0.02 mgd.

The proposed Project would decrease the wastewater flow to the MRWPCA RTP and outfall discharges by 0.11 mgd, or less than 1% of total RTP influent. The addition of storm water flows to the wastewater conveyance system present a net increase in flows to the RTP of 0.02 mgd. Therefore, the change of discharge flow volume through the RTP outfall as a result of the implementation of the proposed Project would be less than 1% and therefore would have inconsequential (less than significant) effects.

The RTP outfall is not located within an EFH Conservation Area. Therefore, the change of discharge flow volume caused by the proposed Project would have no adverse effects on the EFH. Additionally, discharges from the RTP outfall are regulated by its NPDES permit to protect receiving waters and aquatic marine species pursuant to the California Ocean Plan. Therefore, the minimal change of discharge flow volume from the RTP outfall caused by the proposed Project would not impact special status species or receiving water quality.

18.2.3 National Historic Preservation Act (NHPA), Section 106

Section 106 of the NHPA requires that a federal agency must consider the effect of the proposed undertaking on historic properties. A historic property may include a prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Registry of Historic Places (NRHP) maintained by the U S. Sectary of the Interior. Federal agencies must also allow the Advisory Council on Historic Preservation (ACHP) to comment on the proposed undertaking and its potential effects on historic properties.

Section 7.0 of the DEIR evaluates the potential impacts on cultural resources from implementation of the PGWLP. The analysis is based on a Section 106 compliant Cultural Resources Inventory which identifies the area of potential effect; establishes the regulatory and environmental setting, describes research and field methods; makes findings; determines effects; and provides recommendations. Portions of the proposed Project APE lie along the recorded southern boundaries of archaeological sites CAMT-125 and CA-MNT-127 and near the recorded northern boundary of the site CA-MNT-128. The remainder of the APE does not contain surface evidence of significant historic resources and excavations within those portions of the APE would have no effect on significant historic/cultural resources. The current paved environment,

previous sewer facility development, road grading, and golf course development has caused significant previous disturbance in portions of the APE nearest identified archaeological sites. Cultural Resources Impacts 7-1 through 7-4 were determined to result in less than significant impacts for installation of the SRWTP and appurtenances within the APE with the implementation of Mitigation Measures Cultural Resources 1-4.

The SWRCB is responsible to initiate Section 106 consultation and will therefore submit the Cultural Resources Inventory for the Project to SHPO.

18.2.4 Clean Air Act

In 1990, the U.S. Congress adopted amendments to the federal Clean Air Act (CAA) known as the Clean Air Act Amendments (CAAA), which updated the nation's air pollution control program. The CAAA established a number of requirements for achieving federal clean air standards, including new deadlines for their implementation.

The Federal EPA is the federal agency charged with administering the CAA and other federal air quality-related legislation. As a regulatory agency, the EPA's principal air quality related functions include setting national ambient air quality standards (NAAQS) (40 CFR part 50); establishing minimum national emission limits for pollutants considered harmful to public health and the environment; and promulgating regulations.

The CAA requires the EPA to approve state implementation plans (SIPs) to meet and/or maintain the NAAQS. California's SIP is comprised of plans developed at the regional or local level. The proposed Project is located in the North Central Coast Air Basin (NCCAB). The approved SIP for the NCCAB consists of the 2012 Triennial Plan Revision and Contingency Control Measures for the Monterey Bay Region and adopted rules and regulations.

Pursuant to the CAA, the EPA passed two separate federal conformity rules to ensure that air pollutant emissions associated with federally approved or funded activities do not exceed emission budgets established in the applicable SIP and do not otherwise interfere with the State's ability to attain and maintain the NAAQSs in areas working to attain or maintain the standards. The rules were incorporated as Section 40 CFR Parts 51 and 93 and include Transportation Conformity, which applies to transportation plans, programs, and projects, and General Conformity, which apply to all other non-transportation-related projects. Only those federal actions that take place in a region designated as a NAAQS non-attainment area or as a maintenance area must be evaluated for general conformity with the CAA.

As part of the CEQA Plus process, a federal CAA conformity analysis is required if a project is located in an area that is not meeting NAAQSs or is subject to a maintenance plan. An analysis would then be required for each criteria pollutant for which an area is considered in nonattainment or maintenance, if the project emissions are anticipated to be above the "de minimis" level.

As discussed in detail in Section 5–Air Quality, the proposed Project is within the NCCAB, which is an attainment area for all Federal criteria pollutant standards. The

NCCAB is also no longer subject to the 2007 Federal Maintenance Plan for maintaining the national ozone standard (Claymo, 2014). Due to the attainment status of the NCCAB, the proposed Project is not subject to a SIP conformity determination.

18.2.5 Coastal Zone Management Act

The Coastal Zone Management Act (PL 92-583), administered by NMFS' Office of Ocean and Coastal Resource Management, provides for management of the nation's coastal resources, including the Great Lakes, and balances economic development with environmental conservation. The Act outlines two national programs, the National Coastal Zone Management Program and the National Estuarine Research Reserve System. The 34 coastal programs aim to balance competing land and water issues in the coastal zone, while estuarine reserves serve as field laboratories to provide a greater understanding of estuaries and how humans impact them. The Act's overall program objectives remain balanced to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone."

Although portions of the proposed Project are located within the Coastal Zone, which are located near sensitive dune habitat surrounding the Pacific Grove Golf Links, no improvements would occur within these areas. All improvements would be confined to the former PGWWTP area, which is previously disturbed. Therefore, compliance with this Act is not required.

18.2.6 Coastal Barriers Resources Act

The purpose of the Coastal Barriers Resources Act (CBRA) is to eliminate federal development incentives on undeveloped coastal barriers, thereby preventing the loss of human life and property from storms, minimizing federal expenditures, and protecting habitat for fish and wildlife (Office of Emergency Services, 2007).

The CBRA (PL 97-348) designated various undeveloped coastal barrier islands for inclusion in the Coastal Barrier Resources System. Designated areas are ineligible for direct or indirect Federal financial assistance that might support development. Currently there is no Coastal Barrier Resource System designated in the State of California. Therefore, the proposed Project and surrounding lands are not located within the Coastal Barrier Resources System.

18.2.7 Farmland Protection Policy Act

The purpose of the Federal Farmland Protection Policy Act (FPPA) of 1981 (PL 97-98) is to minimize federal contributions to the conversion of farmland to nonagricultural uses by ensuring that federal programs are administered in a manner compatible with State government, local government, and private programs designed to protect farmland. The Natural Resources Conservation Service (NRCS) is the agency primarily responsible for implementing the FPPA, which is a voluntary program that provides funds to help purchase development rights to keep productive farmland in agricultural uses. The program provides matching funds to State, local or tribal government entities and nongovernmental organizations with existing farmland protection programs to purchase conservation easements. Participating landowners agree not to convert the

land to nonagricultural uses and retain all rights to the property for future agriculture. A minimum 30-year term is required for conservation easements, and priority is given to applications with perpetual easements. NRCS provides up to 50% of the fair market value of the easement (NRCS 2012).

U.S. Department of Agriculture (USDA) Regulations (7 CFR Part 658) implementing the FPPA requires Federal agencies to conduct a farmland conversion impact rating (using USDA Form AD-1006) when a proposed project may convert farmlands to non-agricultural uses. This impact rating should be done when the impacts of a proposed project will affect farmlands in the following categories:

- prime farmland - the highest quality land for food and fiber production having the best chemical and physical characteristics for producing;
- unique farmland - land capable of yielding high value crops such as citrus fruits, olives, etc.; and
- farmlands designated as important by State and local governments, with the approval of the Secretary of Agriculture.

Neither the Act nor the regulations apply if:

- the proposed project site does not contain farmland in categories identified above.
- the proposed project is on prime farmland that is already "committed" to urban development or water storage (applies to prime farmland only – refer to 7 CFR 658.2(a)).
- projects that were beyond the planning stage prior to August 6, 1984.
- projects involving grants, loans or mortgage insurance for purchase or rehabilitation of existing structures.

No agricultural uses are currently located in the proposed Project or within the pipeline alignments nor has the site or pipeline alignments historically been used for agricultural purposes. The site or pipeline alignments are is not classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the California Department of Conservation Farmland Mapping and Monitoring Program. There are no Williamson Act contracts applicable to the proposed Project. Thus, the proposed Project would not convert farmland to non-agricultural uses. Therefore, compliance with this Act is not required.

18.2.8 Floodplain Management – Executive Order 11988

Executive Order (EO) 11988, "Floodplain Management" (May 24, 1977), directs Federal agencies to issue or amend existing regulations and procedures to ensure that the potential effects of any action it may take in a floodplain are evaluated and that its planning programs and budget requests reflect consideration of flood hazards and floodplain management. The purpose of this directive is "to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative." Guidance for implementation

of EO 11988 is provided in the floodplain management guidelines of the U.S. Water Resources Council (40 CFR Part 6030; February 10, 1978) and in A Unified National Program for Floodplain Management, prepared by the Federal Interagency Task Force on Floodplain Management (1982).

As discussed in Section 11, "Hydrology and Water Quality," of the Draft EIR, implementation of the proposed Project will not result in construction of housing or other structures within a 100-year flood hazard area.

18.2.9 Migratory Bird Treaty Act (MBTA)

The MBTA (16 U.S.C. Section 703, et seq.), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. The current list of species protected by the MBTA can be found in Title 50 of the CFR, Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

Compliance with the MBTA is being addressed through compliance with the ESA and the CESA. As discussed in Section 6.0, "Biological Resources," of the Draft EIR, the PGLWP could result in harm, injury, or death of individual birds, or abandonment of an active nest within the Monterey cypress trees surrounding the site (Impacts 6-1 and 6-2). However, implementation of Mitigation Measure 1 would reduce any potential project impacts on individual birds or active nests to a less-than-significant level.

18.2.10 Protection of Wetlands – Executive Order 11990

The purpose of Executive Order 11990 (May 24, 1977) is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands."

There are no delineated wetlands meeting Army Corps of Engineers' parameters in either the proposed Project site or within the pipeline alignments (Demand Groups II and III).

As explained in Section 6.2.4.3 Sensitive Habitats, the proposed Project site was evaluated for sensitive habitats during two biological survey efforts. No sensitive habitats were observed during the Project site surveys and none are expected to occur. In addition, the Project site is not designated as ESHA per the City of Pacific Grove Local Coastal Program (LCP) Land Use Plan.

18.2.11 Wild and Scenic Rivers Act of 1968, as amended

The Wild and Scenic Rivers Act (16 USC Section 1271 et seq.) establishes a National Wild and Scenic Rivers System for the protection of rivers with important scenic, recreational, fish and wildlife, and other values. Rivers are classified as wild, scenic, or recreational. The act designates specific rivers for inclusion in the System and prescribes the methods and standards by which additional rivers may be added.

There are no designated Wild and Scenic Rivers in either the proposed Project site or within the pipeline alignments (Demand Groups II and III).

18.2.12 Safe Drinking Water Act of 1974, as amended

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the United States. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources.

SDWA authorizes the EPA to establish minimum standards to protect tap water and requires all owners of operators of public water systems to comply with these primary (health-related) standards. The 1996 amendments to the SDWA require that EPA consider a detailed risk and cost assessment, and best available peer-reviewed science, when developing these standards. State governments also encourage attainment of secondary standards (nuisance-related). EPA also establishes minimum standards for programs to protect underground sources of drinking water from underground injection of fluids.

The EPA established the Sole Source Aquifer (SSA) Program in 1997 to help communities prevent contamination of groundwater from federally funded projects. The proposed Project and surrounding lands are not located within an area designated by EPA Region 9 as a sole source aquifer. Additionally, as stated in Section11.2.1, page 11-2, the Project does not directly overlie a groundwater basin. Therefore, compliance with this Act is not required.

18.2.13 Environmental Justice – Executive Order 12898

EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (59 Federal Register 7629 [1994]), directs Federal agencies to identify and address disproportionately high and adverse health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law. The EO also directs each federal agency to develop a strategy for implementing environmental justice. EO 12898 is also intended to promote nondiscrimination in federal programs that affect human health and the environment, as well as provide minority and low-income communities access to public information and public participation.

The Council on Environmental Quality (CEQ) has oversight of the Federal government's compliance with EO 12898. To facilitate compliance, the CEQ prepared and issued, in consultation with EPA, Environmental Justice Guidance under the National Environmental Policy Act (CEQ 1997).

The City has provided opportunity for meaningful public involvement, analyzed alternatives to the proposed Project, and is proposing to install infrastructure that will enable use of recycled water in appropriate locations throughout the Project area. The Project is not expected to have substantial environmental, human health, or economic effects on the surrounding population. As such, the City is not proposing an activity that discriminates against any population, and the Project would not result in a disproportionately high or adverse effect on the minority population in the Project area.

3.1.10 Section 19.0 References

Pages 19-1 – 19-4 should include the following references:

ABA Consultants. 1999. Analysis of MRWPCA Marine Outfall Benthic Monitoring Program,
Monterey Regional Water Pollution Control Agency, Monterey, California.

BAAQMD. 2011. BAAQMD California Environmental Quality Act - Air Quality Guidelines, Bay Area Air Quality Management District (updated May 2011).

California, State of. Central Coast Regional Water Quality Control Board. 2014. NPDES Permit # CA0048551. Available online at: http://www.waterboards.ca.gov/centralcoast/board_decisions/adopted_orders/2014/2014_0013_npdes.pdf

Claymo. 2014. Personal communications with Amy Clymo, Supervising Air Quality Planner, Monterey Bay Unified Air Pollution Control District, August 14, 2014.

ERRG. 2006. Phase II Lead Contamination Assessment Point Pinos and Pigeon Point Light Stations San Mateo and Monterey Counties, California, Prepared by the Engineering/Remediation Resources Group.

ESRI. 2014. Essential Fish Habitat Proposed Boundary Modifications from Monterey Bay National Marine Sanctuary. Available online at: http://www.arcgis.com/home/item.html?id=10684b279aad482a99ffa191c802dfb5

Fall Creek Engineering, Inc. 2013. Revised Draft Engineering Report - Pacific Grove Area of Special Biological Significance (ASBS) Stormwater Management Project.

Gho. 2011. Foghorn Building, City of Pacific Grove Memorandum to Golf Links Advisory Commission, from Daniel Gho (Department of Public Works Superintendent).

Gho. 2014. Personal Communication with Daniel Gho (City of Pacific Grove Department of Public Works Superintendent) regarding questions arising for environmental site assessment review. May 14, 2014.

Laredo. 2006. Golf Course: Zoning and Use Permit, City of Pacific Grove Memorandum to City Officials, from David Laredo (City Attorney).

Monterey Bay Unified Air Pollution Control District. 2008. Monterey Bay Unified Air Pollution Control District CEQA Air Quality Guidelines.

Tetra-Tech. 2002. Phase 1 Environmental Due Diligence Audit. US Coast Guard Point Pinos Light Station, Pacific Grove, Monterey County, California.

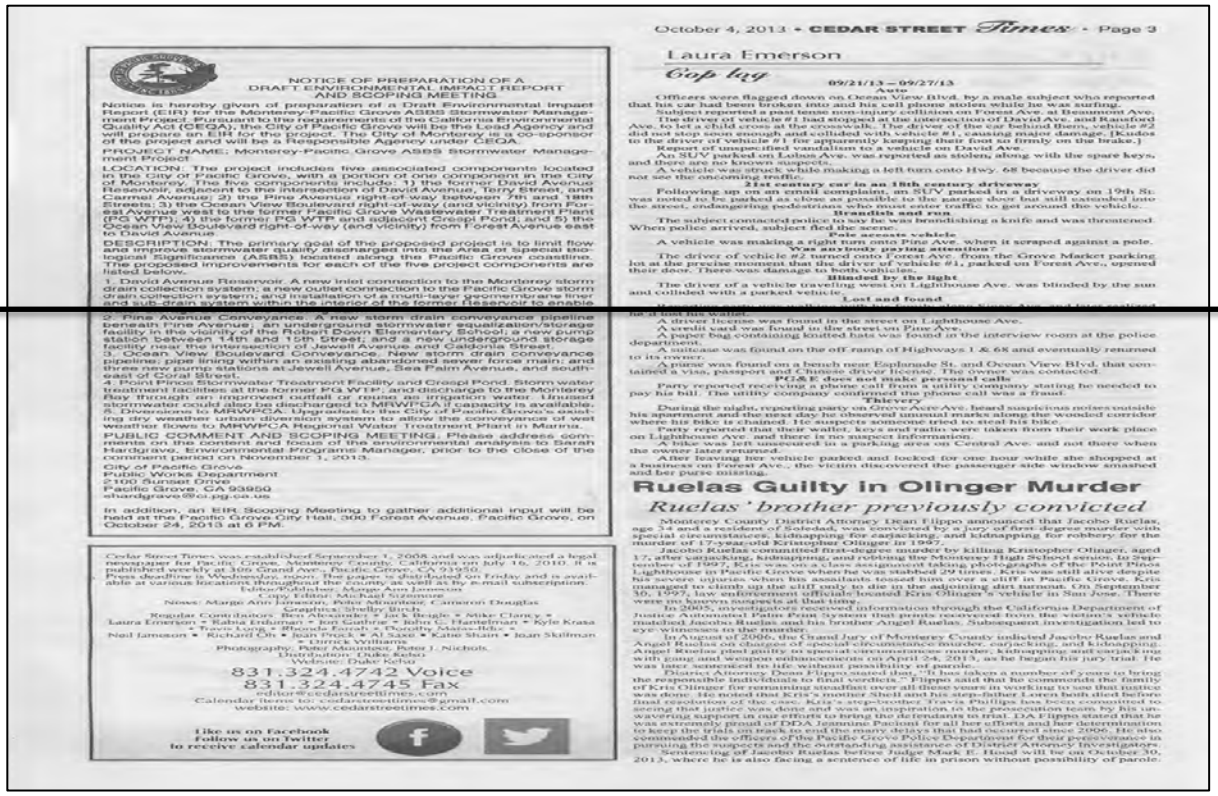
USCG. 2006. Quitclaim Deed for Point Pinos Light Station. GSA Control No. 9-U-CA-1603.

Wallace Group. 2013. City of Pacific Grove Draft Sewer Collection System Master Plan.

Welch. 2014. Personal Communication with Cory Welch (Senior, Environmental Health Specialist III, Underground Storage Tanks, Site Mitigation Hazardous Materials Management Section Monterey County Environmental Health) regarding records of an underground storage tank at 77 Asilomar Blvd., Pacific Grove. June 16, 2014.

3.1.11 Appendix A: NOP and Responses

Appendix A is revised as follows:



NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT AND SCOPING MEETING

Notice is hereby given of preparation of a Draft Environmental Impact Report (EIR) for the Monterey-Pacific Grove ASBS Stormwater Management Project. Pursuant to the requirements of the California Environmental Quality Act (CEQA), the City of Pacific Grove will be the Lead Agency and will prepare an EIR for the project. The City of Monterey is a co-sponsor of the project and will be a Responsible Agency under CEQA.

PROJECT NAME: Monterey-Pacific Grove ASBS Stormwater Management Project

LOCATION: The project includes five associated components located in the City of Pacific Grove, with a portion of one component in the City of Monterey. The five components include: 1) the former David Avenue Reservoir, adjacent to the intersection of David Avenue, Terry Street, and Carmel Avenue; 2) the Pine Avenue right-of-way between 7th and 18th Streets; 3) the Ocean View Boulevard right-of-way (and vicinity) from Forest Avenue west to the former Pacific Grove Wastewater Treatment Plant (PG WTP); 4) the former PG WTP and adjacent Crespi Pond; and 5) the Ocean View Boulevard right-of-way (and vicinity) from Forest Avenue east to David Avenue.

DESCRIPTION: The primary goal of the proposed project is to limit flow and improve stormwater quality discharged into the Area of Special Biological Significance (ASBS) located along the Pacific Grove coastline. The proposed improvements for each of the five project components are listed below.

1. David Avenue Reservoir. A new inlet connection to the Monterey storm drain collection system; a new outlet connection to the Pacific Grove storm drain collection system; and installation of a multi-layer geomembrane liner and sub-drain system within the interior of the former Reservoir to enable

2. Pine Avenue Conveyance. A new storm drain conveyance pipeline beneath Pine Avenue; an underground stormwater equalization/storage facility in the vicinity of the Robert Down Elementary School; a new pump station between 14th and 15th Street; and a new underground storage facility near the intersection of Jewell Avenue and Caledonia Street.

3. Ocean View Boulevard Conveyance. New storm drain conveyance pipeline; pipe lining within an existing abandoned sewer force main; and three new pump stations at Jewell Avenue, Sea Palm Avenue, and southeast of Coral Street.

4. Point Pinos Stormwater Treatment Facility and Crespi Pond. Storm water treatment facilities at the former PG WTP; and discharge to the Monterey Bay through an improved outfall or reuse as irrigation water. Unused stormwater could also be discharged to MRWPCA if capacity is available.

5. Diversions to MRWPCA. Upgrades to the City of Pacific Grove's existing dry weather urban diversion system to allow the conveyance of wet weather flows to MRWPCA Regional Water Treatment Plant in Marina.

PUBLIC COMMENT AND SCOPING MEETING. Please address comments on the content and focus of the environmental analysis to Sarah Hardgrave, Environmental Programs Manager, prior to the close of the comment period on November 1, 2013.

City of Pacific Grove
Public Works Department
2100 Sunset Drive
Pacific Grove, CA 93950
shardgrave@ci.pg.ca.us

In addition, an EIR Scoping Meeting to gather additional input will be held at the Pacific Grove City Hall, 300 Forest Avenue, Pacific Grove, on October 24, 2013 at 6 PM.

Cedar Street Times was established September 1, 2008 and was adjudicated a legal newspaper for Pacific Grove, Monterey County, California on July 16, 2010. It is published weekly at 305 Grand Ave., Pacific Grove, CA 93950.
Press deadline is Wednesday, noon. The paper is distributed on Friday and is available at various locations throughout the county as well as by e-mail subscription.
Editor/Publisher: Marge Ann Jameson
Copy Editor: Michael Sizemore
News: Marge Ann Jameson, Peter Mounteer, Cameron Douglas
Graphics: Shelby Birch
Regular Contributors: Ben Alexander • Jack Beigle • Mike Clancy • Laura Emerson • Rabia Enburan • Jeff Ganfiel • John L. Hamelman • Kyle Krasa • Travis Long • Richard Ott • Joan Prock • Al Sand • Katie Shain • Joan Skillman • Derrick Williams
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Laura Emerson

Cop log

09/21/13 – 09/27/13

Auto

Officers were flagged down on Ocean View Blvd. by a male subject who reported that his car had been broken into and his cell phone stolen while he was surfing. Subject reported a past tense non-injury collision on Forest Ave. at Beaumont Ave. The driver of vehicle #1 had stopped at the intersection of David Ave. and Rasford Ave. to let a child cross at the crosswalk. The driver of the car behind them, vehicle #2 did not stop soon enough and collided with vehicle #1, causing major damage. [Kudos to the driver of vehicle #1 for apparently keeping their foot so firmly on the brake.]

Report of unspecified vandalism to a vehicle on David Ave.

An SUV parked on Lobos Ave. was reported as stolen, along with the spare keys, and there are no known suspects.

A vehicle was struck while making a left turn onto Hwy. 68 because the driver did not see the oncoming traffic.

21st century car in an 18th century driveway

Following up on an email complaint, an SUV parked in a driveway on 19th St. was noted to be parked as close as possible to the garage door but still extended into the street, endangering pedestrians who must enter traffic to get around the vehicle.

Brandish and run

The subject contacted police to say he was brandishing a knife and was threatened. When police arrived, subject fled the scene.

Pole accosts vehicle

A vehicle was making a right turn onto Pine Ave. when it scraped against a pole.

Was anybody praying attention?

The driver of vehicle #2 turned onto Forest Ave. from the Grove Market parking lot at the precise moment that the driver of vehicle #1, parked on Forest Ave., opened their door. There was damage to both vehicles.

Blinded by the light

The driver of a vehicle traveling west on Lighthouse Ave. was blinded by the sun and collided with a parked vehicle.

Lost and found

A driver license was found in the street on Lighthouse Ave.

A credit card was found in the street on Pine Ave.

A paper bag containing knitted hats was found in the interview room at the police department.

A suitcase was found on the off ramp of Highways 1 & 68 and eventually returned to its owner.

A purse was found on a bench near Esplanade St. and Ocean View Blvd. that contained a Visa, passport and Chinese driver license. The owner was contacted.

PG&E does not make personal calls

Party reported receiving a phone call from a utility company stating he needed to pay his bill. The utility company confirmed the phone call was a fraud.

Thievery

During the night, reporting party on Grove Acre Ave. heard suspicious noises outside his apartment and the next day he observed unusual marks along the wooded corridor where his bike is chained. He suspects someone tried to steal his bike.

Party reported that their wallet, keys and radio were taken from their work place on Lighthouse Ave. and there is no suspect information.

A bike was left unsecured in a parking area on Central Ave. and not there when the owner later returned.

After leaving her vehicle parked and locked for one hour while she shopped at a business on Forest Ave., the victim discovered the passenger side window smashed and her purse missing.

Ruelas Guilty in Olinger Murder

Ruelas' brother previously convicted

Monterey County District Attorney Dean Flippo announced that Jacobo Ruelas, age 34 and a resident of Soledad, was convicted by a jury of first degree murder with special circumstances, kidnapping for carjacking, and kidnapping for robbery for the murder of 17-year-old Kristopher Olinger in 1997.

Jacobo Ruelas committed first-degree murder by killing Kristopher Olinger, aged 17, after carjacking, kidnapping, and robbing the Monterey High School senior, in September of 1997. Kris was on a class assignment taking photographs of the Point Pinos Lighthouse in Pacific Grove when he was stabbed 29 times. Kris was still alive despite his severe injuries when his assailants tossed him over a cliff in Pacific Grove. Kris managed to climb up the cliff only to die in the adjoining dirt turnout. On September 30, 1997, law enforcement officials located Kris Olinger's vehicle in San Jose. There were no known suspects at that time.

In 2005, investigators received information through the California Department of Justice Automated Palm Print System that prints recovered from the victim's vehicle matched Jacobo Ruelas and his brother Angel Ruelas. Subsequent investigation led to eye-witnesses to the murder.

In August of 2006, the Grand Jury of Monterey County indicted Jacobo Ruelas and Angel Ruelas on charges of special circumstance murder, carjacking, and kidnapping. Angel Ruelas pled guilty to special circumstance murder, kidnapping and carjacking with gang and weapon enhancements on April 24, 2013, as he began his jury trial. He was later sentenced to life without possibility of parole.

District Attorney Dean Flippo stated that, "It has taken a number of years to bring the responsible individuals to final verdicts." Flippo said that he commends the family of Kris Olinger for remaining steadfast over all these years in working to see that justice was done. He noted that Kris's mother Shell and his step-father Loren both died before final resolution of the case. Kris's step-brother Travis Phillips has been committed to seeing that justice was done and was an inspiration to the prosecution team by his unwavering support in our efforts to bring the defendants to trial. DA Flippo stated that he was extremely proud of DDA Jeannine Pacioni for all her efforts and her determination to keep the trials on track to end the many delays that had occurred since 2006. He also commended the officers of the Pacific Grove Police Department for their perseverance in pursuing the suspects and the outstanding assistance of District Attorney Investigators.

Sentencing of Jacobo Ruelas before Judge Mark E. Hood will be on October 30, 2013, where he is also facing a sentence of life in prison without possibility of parole.

Legal Notices **Legal Notices**

CITY OF PACIFIC GROVE NOTICE
OF PUBLIC SCOPING MEETING
Wednesday, March 4, 2014, 6 p.m.

The City of Pacific Grove will hold a public scoping meeting at the Pacific Grove City Hall City Council Chambers, 300 Forest Avenue, Pacific Grove, California. The meeting purpose is to gather additional input on the proposed project.

Notice is hereby given of preparation of a Draft Environmental Impact Report (EIR) for the Pacific Grove Local Water Project. Pursuant to the requirements of the California Environmental Quality Act (CEQA), the City of Pacific Grove will be the Lead Agency and will prepare an EIR for the project.

Description: The primary goal of the proposed project is to create a new supply of non-potable water for irrigation of the Pacific Grove Municipal Golf Links, the El Carmelo Cemetery and other irrigation locations and for other uses of recycled water as permitted in the State of California to substitute recycled water where potable water is currently being used.

Copies of the NOP are available to the public at City of Pacific Grove Community Development Department, 300 Forest Avenue and at the Pacific Grove Public Library, 550 Central Avenue and posted on the City's website www.ci.pg.ca.us.

FOR FURTHER INFORMATION, PLEASE CONTACT: DANIEL GHO, SUPERINTENDENT PUBLIC WORKS VIA E-MAIL AT DGHO@CI.PG.CA.US BY PHONE AT (831) 648-5722 EXT. 203

/S/ DEBI THOMSEN

DEBI THOMSEN, INTERIM CITY CLERK

The City of Pacific Grove does not discriminate against persons with disabilities. The Pacific Grove City Hall is an accessible facility. A limited number of devices are available to assist those who are hearing impaired.

Publication Date: February 26, 2014

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SECTION 4.0 MITIGATION MONITORING AND REPORTING PROGRAM

4.1 INTRODUCTION

CEQA requires that a Lead Agency establish a program to monitor and report mitigation measures adopted as part of the environmental review process to avoid or reduce the severity and magnitude of potentially significant environmental impact associated with project implementation. CEQA Section 21081.6 (a)(a) requires that a MMRP be adopted at the time that the agency determines to carry out a project for which an EIR has been prepared, to ensure that mitigation measures identified in the EIR are fully implemented.

The impacts of the PGLWP are evaluated in the Draft EIR. The MMRP for the PGLWP is presented in Table 4-1, Mitigation Monitoring and Reporting Program, Pacific Grove Local Water Project. Each MMRP described implementation and monitoring procedures, responsibilities, and timing for each mitigation measure identified in the Draft EIR, including:

Significant Impact: Identifies the Impact Number and statement from the EIR.

Mitigation Measure: Provides full text of the mitigation measure as provided in the EIR.

Monitoring/Reporting Action(s): Designates responsibility for implementation of the mitigation measure and when appropriate, summarizes the steps to be taken to implement the measure.

Mitigation Timing: Identifies the stage of the project during which the mitigation action will be taken.

Mitigation Schedule: Specifies procedures for documenting and reporting the implementation of the mitigation measure.

The City of Pacific Grove may modify the means by which mitigation measures will be implemented, as long as the alternative means ensure compliance during project implementation. The responsibilities of mitigation implementation, monitoring and reporting may extend to several City of Pacific Grove departments.

Table 1 - Mitigation Monitoring Reporting Program

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
Biological Resources				
***Impact Biological Resources 1*:** Construction-related activities associated with Demand Group I may adversely affect, either directly or through habitat modifications, species identified as rare, threatened, endangered, candidate, sensitive, or other special status species in local or regional plans, policies or regulations by the California Department of Fish and Wildlife (CDFW).	**Biological Resources Mitigation Measure 1:** Construction activities that may directly (e.g., vegetation removal) or indirectly affect (e.g., noise/ground disturbance) protect nesting avian species will be timed to avoid the breeding and nesting seasons. Specifically, vegetation and/or tree removal can be scheduled after September 16 and before January 31. If construction must occur during the breeding and nesting season (February 1 through September 15), a qualified biologist would conduct pre-construction surveys for nesting raptors and other protected avian species within 300 feet of proposed construction activities. Pre-construction surveys would be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). Because some bird species nest early in spring and others nest later in summer, surveys for nesting birds may be required to continue during construction to address new arrivals, and because some species breed multiple times in a season. The necessity and timing of these continued surveys would be determined by the qualified biologist based	City of Pacific Grove The actions below will occur if construction occurs during the nesting season: Conduct pre-construction surveys. Incorporate survey results and recommendations into construction specifications. Comply with CDFW guidelines. Sign off on MMRP.	During the breeding season prior to start of construction of each construction phase.	Prior to and during construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
	on review of the final construction plans and in coordination with the USFWS and CDFW, as needed. If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist would notify the City and an appropriate no-disturbance buffer would be imposed within which no construction activities or disturbance would take place (generally 300 feet in all directions for raptors; other avian species may have species-specific requirements) until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.			
***Impact Biological Resources 2*:** Construction-related activities associated with Demand Group I may impede the use of native wildlife nursery sites or directly harm nesting species protected under the provisions of the Migratory Bird Treaty Act.	**Biological Resources Mitigation Measure 1:** (See above)	City of Pacific Grove The actions below will occur if construction occurs during the nesting season: Conduct pre-construction surveys. Incorporate survey results and recommendations into construction specifications. Comply with CDFG guidelines. Sign off on MMRP.	During the breeding season prior to start of construction of each construction phase.	Prior to and during construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
Impact Biological Resources 3: Construction of the new facilities associated with the PGLWP may conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	**Biological Resources Mitigation Measure 2:** The City will select a competent arborist who is well versed in Monterey Cypress growth characteristics. The arborist hired by the City would adhere to the permitting procedures detailed in Municipal Code Chapter 12.20. The arborist would apply for a tree removal/pruning permit from the City as necessary. All actions associated with "protected trees" will be conducted under the supervision of the City arborist, as stated in the City Municipal Code. Pruning will be focused on the larger canopied trees and those trees that have either deadwood or are exhibiting some structural defect or minor disease that must be compensated. Those trees that require most pruning are the closest to the compound entrance (north east property corner), compound work areas, and adjacent parking and restroom structure located along the western property line). Trees would be monitored on occasion for health and vigor after pruning. Should the health and vigor of any tree decline, it would be treated as appropriately recommended by a certified arborist or qualified forester (Cypress Tree Assessment 2014).	City of Pacific Grove Conduct pre-construction tree survey. Obtain tree removal permits and implement mitigation consistent with permit conditions. Sign off on MMRP.	Obtain permits prior to construction. Monitor prior and during construction.	Prior to and during construction.
Cultural Resources				
Impact Cultural Resources 1: Construction of the new facilities associated with the PGLWP may cause adverse change in the significance of a historical resource.	**Cultural Resources Mitigation Measure 1:** The City will conduct a design development process for ground disturbing activities that avoids effects to significant buried cultural resources. At approximately the 50% level of engineering	City of Pacific Grove Conduct Phase I survey Engage Archaeological Monitor and Principal Archaeologist.	Prior to and during construction.	Prior to and during construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
	design, the design team will coordinate with a qualified professional archeologist, who will conduct sampling of project areas that would be subject to ground disturbances near recorded archaeological sites. Sampling will determine the presence/absence of potentially significant cultural materials. Sampling results will be coordinated with the design team who will develop modifications to the design of the proposed Project features to ensure avoidance of impacts to cultural resources. All redesign based on sampling results will be reviewed by the project archaeologist.			
Impact Cultural Resources 1: Construction of the new facilities associated with the PGLWP may cause adverse change in the significance of a historical resource.	**Cultural Resources Mitigation Measure 2:** A qualified archaeological monitor would be present during all Project excavations in the SRWTP, for the Ocean View Boulevard sanitary sewer pipeline, for the sewer pipeline and recycled water pipes between the SRWTP and Asilomar Avenue, and in El Carmelo Cemetery. The monitor would document and recover any potentially significant cultural materials that may be found in the excavated soil. If it is determined by the archaeological monitor that cultural materials existing in the excavated soil, excavated soil may be screened to assist in such data recovery.	City of Pacific Grove Engage Archaeological Monitor and Principal Archaeologist.	Prior to and during construction.	Prior to and during construction.
Impact Cultural Resources 1: Construction of the new facilities associated with the PGLWP may cause adverse change in the significance of a historical resource.	**Cultural Resources Mitigation Measure 3:** If, at any time, previously undisturbed midden containing potentially significant cultural materials or features is encountered, work would be halted until the monitor and/or the principal archaeologist have evaluated the discovery.	City of Pacific Grove Engage Archaeological Monitor and Principal Archaeologist.	Prior to and during construction.	Prior to and during construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
	If the find is determined to be significant, appropriate data recovery mitigation would be developed and implemented with the concurrence of the City.			
Impact Cultural Resources 2: Construction of the new facilities associated with the PGLWP may cause change in the significance of an archaeological resource.	**Cultural Resources Mitigation Measure 1-3:** (See above)	City of Pacific Grove Conduct Phase I survey. Engage Archaeological Monitor and Principal Archaeologist.	Prior to and during construction.	Prior to and during construction.
Impact Cultural Resources 3: Construction of the new facilities associated with the PGLWP may damage a unique paleontological resource or site or unique geologic feature.	**Cultural Resources Mitigation Measure 1-3:** (See above)	City of Pacific Grove Conduct Phase I survey. Engage Archaeological Monitor and Principal Archaeologist.	Prior to and during construction.	Prior to and during construction.
Impact Cultural Resources 4: Construction of the new facilities associated with the PGLWP may disturb human remains, including those interred outside of formal cemeteries.	**Cultural Resources Mitigation Measure 4:** If archaeological resources or human remains are unexpectedly discovered during construction, work would be halted on the Project parcel until a qualified professional archaeologist can evaluate it. If the find is determined to be significant, appropriate mitigation measures would be formulated, with the approval of the lead agency, and implemented.	City of Pacific Grove Contract with a qualified professional archaeologist.	During construction.	During construction.
Geology and Soils				
***Impact Geology and Soils 1*:** Construction of the new facilities associated with the PGLWP would expose people to injury or structures to damage from potential rupture of a known earthquake fault, strong groundshaking, seismic-related ground failure including liquefaction, or	**Geology and Soils Mitigation Measure 1:** The City will follow and implement all recommendations for the retrofit of the existing PGLWP tanks and for construction of utility trenches as contained in the Geotechnical Report (Appendix G of this EIR). These recommendations include earthwork, water	City of Pacific Grove Implement recommendations from Geotechnical Report.	During Construction.	During Construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
landslides.	tank foundations, concrete slabs on grade, and surface drainage. Earthwork recommendations include clearing and grubbing; excavations, shoring and dewatering; subgrade preparation; material for engineered fill; engineered fill placement and compaction; cut and fill slopes; utility trench excavation and backfill; and wet weather construction. Water tank foundation recommendations include load bearing capacity; settlement; soil resistance to lateral loads; frictional resistance; and sidewalls of tanks. Recommendations for concrete slabs on grade are also made in this Geotechnical Report, although the Report notes that "none [is] presently proposed". Because the site is composed of highly erodible dune sand deposits, surface drainage recommendations include establishing positive drainage away from building foundations; concrete slabs on grade and pavements; directing water flow towards suitable collection and discharge facilities; and planting and mulching all disturbed surfaces prior to winter rains.			
***Impact Geology and Soils 2*:** Construction of the new facilities associated with the PGLWP would involve grading and movement of earth, which could expose soils to erosion and result in the loss of topsoil.	**Geology and Soils Mitigation Measure 2:** Construction Best Management Practices (BMPs) established by the City Public Works Department would be required. These construction BMPs require that every construction project have an erosion and sediment control plan to prevent soil and materials from leaving the site. Construction activities must be scheduled so that soil is not exposed for long periods of time, and key sediment control practices must be	City of Pacific Grove Implement recommendations from City Construction BMPs for erosion and sediment control.	Prior to and during construction.	Prior to and during construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
	installed. These practices may include, but are not limited to: perimeter control (use of gravel bags, silt fences, and straw wattles); construction material storage (covered when not in use); dirt and grading measures (daily watering of dirt and travel mounds; covering during the rainy season [October 15 – April 15]); and storm drain measures (use of perimeter controls).			
Hazards and Hazardous Materials				
Impact Hazards and Hazardous Materials 1: The proposed new facilities associated with the PGLWP would be located on a site which is included on a list off hazardous material sites compiled pursuant to Government Code Section 65962.5 and as a result would create a significant hazard to the public or the environment.	**Hazards and Hazardous Materials Mitigation Measure 1 –** CCR Title 8 Section 5208 requires that a State-certified risk assessor conduct a risk assessment and/or paint inspection of all structures constructed prior to 1978 for the presence of asbestos or lead-based paint prior to demolition. If such hazards are determined to exist onsite, the risk assessor would then prepare a site-specific hazard control plan detailing asbestos and/or paint removal methods and specific instructions for providing protective clothing and gear for abatement personnel. If necessary, a State-certified lead-based paint and an asbestos removal contractor (independent of the risk assessor) would be retained to conduct the appropriate abatement measures as required by the plan. Wastes from abatement and demolition activities would be disposed of at a landfill(s) licensed to accept such waste. Once all abatement measures have been implemented, the risk assessor would conduct a clearance examination and provide written documentation to the City that testing and abatement have been completed in	City of Pacific Grove State-certified risk assessor conducts risk assessment and/or paint inspection. Prepare hazard control plan. Conduct abatement measures. Clearance Examination – testing and abatement.	Prior to construction.	Prior to construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
	accordance with all federal, state, and local laws and regulations.			
Noise				
Impact Noise-1: Construction of the proposed new facilities associated with the PGLWP would result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, or would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	**Noise Mitigation Measure 1:** The construction contractor will limit construction hours for the PGLWP to between 8:00 AM and 7:00 PM on weekdays and 9:00 AM to 4:00 PM on Saturdays. No construction work will be allowed to occur on Sundays or other federal, state or local holidays.	City of Pacific Grove Limit construction hours.	During construction.	During construction.
Impact Noise-1: Construction of the proposed new facilities associated with the PGLWP would result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, or would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	**Noise Mitigation Measure 2:** Stationary construction equipment that generates noise that exceeds 70 dB at the boundaries of adjacent sensitive receptors will be baffled to reduce noise and vibration levels. All construction equipment powered by internal combustion engines will be properly muffled and maintained. Unnecessary idling of internal combustion engines will be prohibited.	City of Pacific Grove Baffle construction equipment that generates noise exceeding 70 dB. Muffle and maintain internal combustion engine powered equipment.	During construction.	During construction.
Impact Noise-1: Construction of the proposed new facilities associated with the PGLWP would result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, or would result in a substantial temporary or periodic increase in	**Noise Mitigation Measure 3:** The City will provide a Noise Mitigation and Monitoring Program that consists of the following: • Construction contracts that specify that all construction equipment, fixed or mobile, be equipped with properly operating and maintained mufflers and other state required noise	City of Pacific Grove Prepare Noise Mitigation and Monitoring Program.	Prior to and during construction.	Prior to and during construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
ambient noise levels in the project vicinity above levels existing without the project.	attenuation devices. • All property owners and occupants located within 300 feet of the proposed Project will be notified no later than 15 days prior to start of construction regarding the schedule of the Project. All notices will be reviewed and approved by the City Planning Division prior to the mailing or posting and will indicate the dates and duration of construction activities, as well as provide a contact name and telephone number where residents can inquire about the construction process and register complaints. • Prior to issuance of any grading or building permit, the construction contractor will demonstrate to the satisfaction of the City Planning Division how construction noise reduction methods such as shutting off idling equipment and vehicles, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging and parking areas and occupied residential areas, and electric air compressors and similar power tools, rather than diesel equipment, be used where feasible. • During construction, stationary equipment will be placed such that emitted noise is directed away from sensitive noise receptors. • For all noise-generating construction activity on each component site,			

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
	additional noise attenuation techniques will be employed to reduce noise levels to the maximum extent feasible. Such techniques may include, but are not limited to: the use of sound blankets on noise generating equipment and the construction of temporary sound barriers between the construction site and nearby sensitive receptors.			
Impact Noise-1: Construction of the proposed new facilities associated with the PGLWP would result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, or would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	**Noise Mitigation Measure 4:** The construction contractor will provide staging areas on site to minimize off-site transportation of heavy construction equipment. These areas will be located to maximize the distance between activity and sensitive receptors (neighboring residences). This would reduce noise levels associated with most types of idling construction equipment.	City of Pacific Grove Provide staging areas.	During construction.	During construction.
Impact Noise-1: Construction of the proposed new facilities associated with the PGLWP would result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, or would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	**Noise Mitigation Measure 5:** The construction contractor will use electrical power to run air compressors and similar power tools and to power any temporary structures, such as construction trailers.	City of Pacific Grove Use electrical power to run air compressors and power tools.	During construction.	During construction.
Transportation/Traffic				

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
Impact Transportation/Traffic-1: Construction of the proposed new facilities associated with the PGLWP would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, or could potentially conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	**Traffic Mitigation Measure 1:** Temporary Traffic Handling Plans will be prepared for proposed lane reductions on Ocean View Boulevard and Asilomar Avenue. The plans will be prepared in accordance with the latest California Manual on Uniform Traffic Control Devices (CA MUTCD) and Work Area Traffic Control Handbook (WATCH) manual requirements (where appropriate) and contain provisions for handling bike and pedestrian traffic, as well as ensuring access to neighboring facilities and residences during construction and ensuring emergency access to fire hydrants along all roadways. The plans will be reviewed and approved by the City Public Works Department prior to construction.	City of Pacific Grove Prepare Temporary Traffic Handling Plan. Return roads to pre-construction conditions.	Prior to construction.	Prior to construction.
Impact Transportation/Traffic-1: Construction of the proposed new facilities associated with the PGLWP would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, or could potentially conflict with an applicable congestion	**Traffic Mitigation Measure 2:** Construction contractor will coordinate with City staff regarding the duration and locations of short-term traffic diversions. Temporary traffic handling plans will be prepared when necessary to detour traffic to appropriate locations. In addition, the daytime hours of traffic diversion will be restricted to allow for adequate traffic flow at high traffic volume locations during peak commute hours.	City of Pacific Grove Coordinate with City staff regarding short-term traffic diversions.	Prior to and during construction.	Prior to and during construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.				
Impact Transportation/Traffic-1: Construction of the proposed new facilities associated with the PGLWP would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, or could potentially conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	**Traffic Mitigation Measure 3:** During construction, the City will use detour signing for vehicles, bicycles, and pedestrians on alternate access streets when temporary full street closure is. At each of the lane closure locations and at the intersection of Asilomar Avenue and Ocean View Boulevard, a traffic flagger will be utilized to ensure that traffic can be safely accommodated through the closures during construction.	City of Pacific Grove Use detour signage. Use traffic flagger.	During construction.	During construction.
Impact Transportation/Traffic-1: Construction of the proposed new facilities associated with the PGLWP would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit	**Traffic Mitigation Measure 4:** Following construction, the City will ensure that road surfaces damaged during construction are returned to their preconstruction condition or better.	City of Pacific Grove Return roads to pre-construction conditions.	Post construction.	Post construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, or could potentially conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.				
Impact Transportation/Traffic-2: Construction of the proposed new facilities associated with the PGLWP would substantially increase hazards due to a design feature or incompatible uses.	**Traffic Mitigation Measures 1-4:** (See above)	(See above)	(See above)	(See above)
Impact Transportation/Traffic-3: Construction of the proposed new facilities associated with the PGLWP would result in inadequate emergency access.	**Traffic Mitigation Measures 1-4:** (See above)	(See above)	(See above)	(See above)
Impact Transportation/Traffic-4: Construction of the proposed new facilities associated with the PGLWP will conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	**Traffic Mitigation Measures 1-4:** (See above)	(See above)	(See above)	(See above)
Utilities and Service Systems				

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
Impact Utilities and Service Systems 1: Construction of the proposed new facilities associated with the PGLWP could substantially interfere with or change the demand for utilities or public services.	**Utilities and Service Systems Mitigation Measure 1:** Prior to excavation, the City or its contractors will locate overhead and underground utility lines, such as natural gas, electricity, sewage, telephone, fuel lines, and water lines, that may reasonably be expected to be encountered during excavation work. Pursuant to state law, the City or its contractor will notify Underground Service Alert North (USAN). Information regarding the size, color, and location of existing utilities will be confirmed before construction activities begin.	City of Pacific Grove Locate utility lines. Notify USAN.	Prior to construction.	Prior to construction.
Impact Utilities and Service Systems 1: Construction of the proposed new facilities associated with the PGLWP could substantially interfere with or change the demand for utilities or public services.	**Utilities and Service Systems Mitigation Measure 2:** The City or its contractors will find the exact locations of underground utilities by safe and acceptable means, including the use of hand excavation and modern potholing techniques as well as customary types of excavation equipment. Detailed plans and specifications will be prepared as part of the Project design plans to include procedures for the excavation, support, and fill of areas around utility cables and pipes. All affected utility service providers will be notified of construction plans and schedule. Arrangements will be made with these entities regarding protection, relocation, or temporary disconnection of services.	City of Pacific Grove Prepare plans and specification for excavation, support, and fill of affected utility lines. Coordinate with affected utilities.	Prior to and during construction.	Prior to and during construction.
Impact Utilities and Service Systems 1: Construction of the proposed new facilities associated with the PGLWP could substantially interfere with or change the demand for	**Utilities and Service Systems Mitigation Measure 3:** The City will comply with all conditions of its utility excavation or encroachment permits and will include such conditions in construction	City of Pacific Grove Include encroachment permit conditions in construction contract specifications.	Prior to and during construction.	Prior to and during construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
utilities or public services.	contract specifications.			
Impact Utilities and Service Systems 1: Construction of the proposed new facilities associated with the PGLWP could substantially interfere with or change the demand for utilities or public services.	**Utilities and Service Systems Mitigation Measure 4:** The City or its contractors will confirm the specific location of all high priority utilities and such locations will be highlighted on all construction drawings. In the contract specifications, the City will require that the contractor provide weekly updates on planned excavation for the upcoming week and identify when construction would occur near a high priority utility. On days when this work is to occur, the City's construction managers will attend tailgate meetings with contractor staff to review all measures regarding such excavations. The contractor's designated health and safety officer will specify a safe distance to work near high-pressure gas lines, and excavation closer to the pipeline will not be authorized until the designated health and safety officer confirms and documents in the construction records that: (1) the line was appropriately located in the field by the utility owner using as-built drawings and a pipeline-locating device, and (2) the location was verified by hand by the construction contractor. The designated health and safety officer will provide written confirmation to the City that the line has been adequately located, and excavation will not start until the City has received this confirmation.	City of Pacific Grove Confirm location of high priority utilities. Require weekly updates on planned excavation. Field document and confirm location of high priority utility and excavation plan.	Prior to and during construction.	Prior to and during construction.
Impact Utilities and Service Systems 1: Construction of the	**Utilities and Service Systems Mitigation Measure 5:** While any	City of Pacific Grove	During	During

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
proposed new facilities associated with the PGLWP could substantially interfere with or change the demand for utilities or public services.	excavation is open, the City or its contractors will protect, support, or remove underground utilities as necessary to safeguard employees.	Support utilities during excavation.	construction.	construction.
Impact Utilities and Service Systems 1: Construction of the proposed new facilities associated with the PGLWP could substantially interfere with or change the demand for utilities or public services.	**Utilities and Service Systems Mitigation Measure 6:** The City or its contractors would notify local fire departments any time damage to a gas utility results in a leak or suspected leak, or whenever damage to any utility results in a threat to public safety.	City of Pacific Grove Notify fire department during suspected gas utility leak.	During construction.	During construction.
Impact Utilities and Service Systems 1: Construction of the proposed new facilities associated with the PGLWP could substantially interfere with or change the demand for utilities or public services.	**Utilities and Service Systems Mitigation Measure 7:** The City or its contractors will contact utility owner if any damage occurs as a result of the proposed Project and promptly reconnect disconnected cables and lines with approval of owner.	City of Pacific Grove Contact utility owner if any damage occurs.	During construction.	During construction.
Impact Utilities and Service Systems 1: Construction of the proposed new facilities associated with the PGLWP could substantially interfere with or change the demand for utilities or public services.	**Utilities and Service Systems Mitigation Measure 8:** The City will observe California Department of Public Health (CDPH) standards, which require: (1) a 10-foot horizontal separation between parallel sewage and water mains (gravity or force mains); (2) a 1-foot vertical separation between perpendicular water and sewage line crossings; and (3) encasement of sewage mains in protective sleeves where a new water line crosses under or over an existing wastewater main; unless permitted mitigation measures are used per the latest CDPH Guidance Memo.	City of Pacific Grove Observe CDPH standards for pipeline separation requirements.	During construction.	During construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
Impact Utilities and Service Systems 1: Construction of the proposed new facilities associated with the PGLWP could substantially interfere with or change the demand for utilities or public services.	**Utilities and Service Systems Mitigation Measure 9:** The City or its contractors will coordinate final construction plans and specifications with affected utilities, such as Pacific Gas & Electric (PG&E). If any interruption of service is required, the City or its contractors will notify residents and businesses in the project corridor of any planned utility service disruption two to four days in advance, in conformance with county and State standards.	City of Pacific Grove Coordinate with affected utilities.	During construction.	During construction.
Impact Utilities and Service Systems 2: Construction of the proposed new facilities associated with the PGLWP could interfere with or substantially change the demand for government services such as schools, hospitals, or police and fire protection, or require alteration of these services.	**Utilities and Service Systems Mitigation Measure 1-9:** (See above)	(See above)	(See above)	(See above)
Impact Utilities and Service Systems 3: Construction of the proposed new facilities associated with the PGLWP could exceed the capacity of local landfills or violate federal, state, or local statutes and regulations related to solid waste.	**Utilities and Service Systems Mitigation Measure 10:** The City would encourage Project facility design and construction methods that produce less waste, or that produce waste that could more readily be recycled or reused.	City of Pacific Grove Encourage design and construction methods with less waste.	Prior to and during construction.	Prior to during construction.
Impact Utilities and Service Systems 3: Construction of the proposed new facilities associated with the PGLWP could exceed the capacity of local landfills or violate federal, state, or local statutes and regulations related to solid waste.	**Utilities and Service Systems Mitigation Measure 11:** The City would include in its construction specifications a requirement for the contractor to describe plans for recovering, reusing, and recycling wastes produced through construction, demolition, and excavation activities.	City of Pacific Grove Contractor to describe plans for recovering, reusing, and recycling wastes produced during construction.	Prior to and during construction.	Prior to during construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
Impact Utilities and Service Systems 4: Construction of the proposed new facilities associated with the PGLWP could impair or prevent a city or county from complying with the waste diversion mandates of the California Integrated Waste Management Act of 1989.	**Utilities and Service Systems Mitigation Measures 10-11:** (See above)	(See above)	(See above)	(See above)

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SECTION 5.0 LIST OF PREPARERS

This EIR was prepared by Brezack & Associates Planning (B&AP). Persons involved in data gathering analysis, project management, and quality control include:

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Daniel Gho, Public Works Superintendent

Vincent Gentry, Public Works

David Laredo, City Attorney

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Debbie Platt, Project Coordinator/Designer

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APPENDIX H

Distribution List and Newspaper Notice

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Washington, DC 20314-1000

US Fish and Wildlife Service
Ventura Office
2493 Portola Road, Suite B
Ventura, CA 93003

National Marine Fisheries Service
5-100, 650 Capitol Mall
Sacramento, CA 95814

California Department of Fish and Wildlife
Central Region
1234 E. Shaw Avenue
Fresno, CA 93710

State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Monterey Bay National Marine Sanctuary,
Attn. Bridget Hoover
99 Pacific Street, Bldg. 455A
Monterey, California 93940

Coastal Commission Central Coast Office,
Attn. Dan Carl
725 Front Street, Suite 300
Santa Cruz, CA 95060-4508

Monterey Regional Water Pollution
Control Agency
Attn. Michael McCollough
5 Harris Court, Bldg. D
Monterey, CA 93940

Monterey Peninsula Water Management
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Attn. Larry Hampson
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Monterey, CA 93942-0085

Division of Safety and Dams
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Monterey, CA 93944-3223
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Central Coast Regional Water Quality
Control Board
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895 Aerovista Place, Suite 101
San Luis Obispo, CA. 93401-7906
JEpp@waterboards.ca.gov

California American Water
Attn: Eric J. Sabolsice, Jr, Director,
Operations Coastal Division
511 Forest Lodge Road
Pacific Grove, CA 93950
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County Clerk
P. O. Box 29
Salinas CA 93902-0570

Monterey City Clerk's Office
City Hall
580 Pacific Street
Monterey, CA 93940

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Monterey County RMA – Planning
Department, Attention Mike Novo
novom@monterey.ca.us

Sierra Club, Ventana Chapter
chapter@ventana.sierraclub.org

Monterey/Santa Cruz Counties Building
and Construction Trades Council

League of Women Voters, Executive
Director

Pacific Grove City Council
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info@tamcmonterey.org
novom@monterey.ca.us
dstoldt@mpwmd.net
cnps@cnps.org
landwatch@mclw.org
sidorj@co.monterey.ca.us
listerdm@co.monterey.ca.us
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vclairmont@lwv.org

Legal Notices | Legal Notices | Legal Notices

CITY OF PACIFIC GROVE
PUBLIC WORKS DEPARTMENT

NOTICE OF AVAILABILITY OF DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR LOCAL WATER PROJECT

Notice is hereby given that the City of Pacific Grove has completed an assessment of possible environmental effects of the Pacific Grove Local Water Project, determined that an Environmental Impact Report (EIR) is appropriate, and prepared a Draft EIR analyzing the potential effects of the proposed project. This determination has been made, the Draft EIR has been prepared according to the California Environmental Quality Act (CEQA), and the State CEQA Guidelines.

Project Description: The Pacific Grove Local Water Project consists of the construction and operation of a wastewater diversion facility, a new satellite recycled water treatment plant, waste discharge facilities, recycled water distribution pipelines, and pump stations. The Pacific Grove Local Water Project facilities would be primarily be located within the City of Pacific Grove's former Point Pinos Wastewater Treatment Plant near the intersection of Asilomar Avenue and Ocean view Boulevard, and within the Pacific Grove Golf Links property. The primary goal of the Pacific Grove Local Water Project is to produce and distribute high quality recycled water to replace potable water used for non-potable water demands such as landscaping.

Potential Project Impacts: The Draft EIR has identified the following significant effects associated with the proposed project that can be mitigated to less than significant: construction-related impacts to sensitive species and conflicts with local ordinances to protect biological resources, exposure to earthquake hazards, exposure to hazardous materials, impacts to cultural resources, noise impacts, impacts on traffic circulation and congestion management, and impacts to utility services. There are no significant environmental effects that cannot be avoided if the proposed project is implemented, nor are there significant irreversible environmental effects that cannot be avoided if the proposed project is implemented.

Public Review Period: The City of Pacific Grove appreciates your interest and participation in this environmental review process. The Draft EIR is available for review until November 6, 2014. Public comments will be accepted during the public review period until 5:00 p.m. on November 6, 2014. Comments may be sent via mail, email, or fax and should be addressed to:

PGLWP Draft EIR
City of Pacific Grove
Attention: Daniel Ghio, Superintendent Public Works
300 Forest Avenue
City of Pacific Grove, CA 93950

Telephone: (831) 648-5722 ext.203
Fax: (831) 375-0627

Email: dghio@cityofpacificgrove.org

Public Hearing: The Pacific Grove City Council will conduct a public hearing on November 19, 2014 at 6 p.m. to consider certification of the Pacific Grove Local Water Project Final Environmental Impact Report (EIR) and approval of the Pacific Grove Local Water Project. The public hearing will be held in the Council Chambers, 300 Forest Avenue, Pacific Grove.

Obtaining the Draft EIR: Copies of the Draft EIR are available to the public at the City of Pacific Grove Community Development Department, 300 Forest Avenue and at the Pacific Grove Public Library, 550 Central Avenue and posted on the City's website http://www.ci.pg.ca.us/index.aspx?page=28&recordid=182&returl=%2findex.aspx

FOR FURTHER INFORMATION, PLEASE CONTACT: DANIEL GHIO, SUPERINTENDENT PUBLIC WORKS VIA E-MAIL AT DGHIO@CITYOFPACIFICGROVE.ORG BY PHONE AT (831) 648-5722 EXT. 203

DANIEL GHIO, SUPERINTENDENT

The City of Pacific Grove does not discriminate against persons with disabilities. The Pacific Grove City Hall is an accessible facility. A limited number of devices are available to assist those who are hearing impaired.

Publication Date: October 29, 2014

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APPENDIX I

Condition Assessment Reports

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HARPER & ASSOCIATES ENGINEERING, INC.

CONSULTING ENGINEERS

1240 E. Ontario Ave., Ste. 102-312 Corona, CA 92881-8671
Phone (951) 372-9196 Fax (951) 372-9198
www.harpereng.com

CORROSION REPORT

PROJECT:	Corrosion Engineering Evaluation of Two Concrete Water Storage Structures
STRUCTURE:	430,000 Gallon Reinforced Concrete Digester
OWNER:	Brezack & Associates Planning
LOCATION:	Pacific Grove, California
INVESTIGATED BY:	Andre Harper, Project Engineer
DATE:	July 2013

I GENERAL INFORMATION

A. Construction and Maintenance Details

Structure is a partially buried circular reinforced concrete digester which is currently being utilized for water storage. The structure is located in Pacific Grove, California. The digester was constructed in 1952 and has a diameter of 55 feet, with an approximate overall height of 24 feet. The roof is supported by four concrete columns. Access into the digester is through a roof hatch.

B. Site Conditions

The digester is located on a dirt and asphalt site and enclosed by a chain link fence. The digester is partially buried with a dirt berm covering a portion of the wall. There is adequate vehicle access around the digester. No difficulty is anticipated for Contractor mobilization, assuming use of normal portable air compressor and related equipment.

There is a golf course in close proximity which could be adversely affected by dust and contamination associated with abrasive blast cleaning and painting operations. Accordingly, extreme caution must be exercised during all cleaning and painting operations.

C. Existing Coating, Paint, and Sealant Systems

1. No records for the coatings, paints, or sealants were made available to HAE for review. The field investigation indicates the following:

a. Interior Surfaces

1) Concrete surfaces are uncoated.

2) The interior appurtenances appear to be coated carbon steel and random plastic.

b. Exterior Surfaces

1) Concrete roof surfaces are unpainted.

2) Concrete wall surfaces are painted with an unknown paint system.

3) Exterior appurtenances appear to be a combination of painted carbon steel and plastic.

D. Cathodic Protection System

The digester has no cathodic protection system installed on the interior of the structure.

E. Heavy Metal Analyses

No samples of interior coatings or paints were removed for analyses for the presence of heavy metals, specifically lead, chromium compounds, zinc, or asbestos, as this was not included in the scope of work.

F. Contract Information

Harper & Associates Engineering, Inc. was retained by Brezack & Associates Planning to accomplish field investigation of two concrete structures to observe interior and exterior surfaces and conditions, with photographs taken to record conditions. This report has been prepared with remedial repair/recoating/repainting recommendations and cost estimates for accomplishing the work.

This Corrosion Report is prepared solely on the basis of noted field investigation. Conclusions and recommendations are strictly those determined by Consultant to be consistent with the best and most experienced practice within the corrosion engineering profession.

II INVESTIGATION

A. Investigation was accomplished as follows:

1. Exterior Surfaces

a. Investigation of the roof surfaces and appurtenances on the roof was accomplished by traversing the roof.

b. Investigation of the exposed portion of the wall was accomplished by traversing the perimeter of the digester from ground level, examining areas above grade and within reach.

c. Photographs were taken of typical and specific areas to illustrate condition of surfaces.

2. Interior Surfaces

a. The interior ladder is severely deteriorated so a temporary tripod was utilized to lower the engineer into the digester to perform the evaluation.

b. Interior surfaces were examined visually by traversing the bottom surfaces.

c. Light was supplied via high intensity portable light and natural light from roof hatches.

d. Various chipping tools were employed to examine typical areas of defective concrete and coating within reach.

e. Photographs were taken of typical and specific areas to illustrate condition of surfaces.

III OBSERVATIONS

A. Based upon the above reported investigation, the following observations were noted:

1. Exterior Surfaces

a. Exterior Roof

1) Overall, the concrete roof surfaces are in fair to good condition; however the metal appurtenances are in poor condition. (Photos E-2 through E-10)

2) Severe corrosion is present on the roof penetration covers and inlet piping. (Photos E-3, E-4, and E-7 through E-10)

3) Minor cracking of the concrete roof is present. (Photos E-5 and E-6)

b. Above Grade Wall Surfaces

1) The exposed portions of the walls are in overall fair to good condition with random spalls, cracks, and delamination of the paint system. (Photos E-1 and E-11 through E-21)

2) Cracking and spalling is present on the underside of the stairway. (Photo E-11)

3) Random spalling and corrosion of exposed reinforcing steel is present on the wall surfaces. (Photos E-12 through E-15)

4) Delamination of the paint system is present on the wall surfaces.

(Photos E-12 through E-16)

5) The overflow piping is severely corroded. (Photos E-16 and E-17)

6) A dirt berm has been pushed against portions of the wall. (Photos E-18 through E-20)

7) A large penetration has been patched and filled. (Photo E-21)

2. Interior Surfaces

a. Underside of Roof

1) The concrete roof surfaces are in overall fair to good condition. (Photos I-1 through I-12)

2) Minor corrosion is present randomly on the roof and columns. (Photos I-1 through I-12)

3) Minor cracking is present in the concrete roof. (Photos I-2 through I-4)

4) Moderate corrosion is present at the roof penetrations with staining on the adjacent concrete surfaces. (Photos I-5 through I-11)

b. Walls, Appurtenances, and Bottom

1) The concrete walls are in overall fair to good condition with dark staining present. The bottom surfaces could not be thoroughly evaluated due to water and debris covering the horizontal surfaces. (Photos I-13 through I-36)

2) Severe corrosion is present on the miscellaneous piping. (Photos I-13, I-16, and I-25 through I-27)

3) Minor random cracking and corrosion are present at the roof to wall transition and on the wall surfaces. (Photos I-14, I-15, and I-20 through I-24)

4) The ladder is severely corroded and deteriorated. (Photos I-16 through I-18)

5) A penetration has been filled and patched. (Photo I-22)

6) Isolated tubercles are present on the wall. (Photos I-23 and I-24)

7) Miscellaneous debris is present on the bottom surfaces. (Photos I-28, I-29, and I-34 through I-36)

8) Moderate corrosion is present on the columns. (Photos I-30

through I-34)

3. Safety, Health, and Code Features

a. No handrailing assembly is present on the roof around the hatches or along the stairway.

b. A large crack is present on the exterior stairway.

c. The interior ladder is severely corroded and deteriorated.

IV CONCLUSIONS

A. Based on the above noted observations, the following conclusions are drawn:

1. Exterior Surfaces

a. Exterior Roof

1) Concrete surfaces are in fair to good condition and the metal appurtenances are in poor condition.

2) Severe corrosion on the roof penetrations and piping appears to be the result of the paint system far exceeding its useful life expectancy. Typical paint systems have a 20 to 25 year life expectancy.

3) Minor cracking of concrete surfaces commonly occurs in concrete as it cures and typically does not cause a problem. No corrosion is present, indicating the cracking is likely only a surface defect.

b. Above Grade Wall Surfaces

1) The visible portions of the walls are in fair to good condition even though there are random spalls and hairline cracking that could lead to further damage if they are not remediated.

2) Cracking and spalling on the stairway appears to be the result of differential movement. The crack appears to extend all the way through the stairway and therefore, may create a safety concern.

3) Spalling on the wall is typically the result of either cracks in the concrete or placing the reinforcing steel too close to the surface. When moisture reaches the steel, it begins to corrode and rust scale forms causing the spalling.

4) Delamination of the paint system on the concrete surfaces appears to be due to the age of the system and lack of maintenance.

5) Severe corrosion on the overflow piping is due to the same

reasons noted above in section 1. a. 2).

6) The dirt berm is a concern, as it is concealing the lower concrete surfaces which may contain defects that can not be evaluated at this time.

7) The patched penetration on the wall appears to be in good condition, however the procedure used to fill the penetration is unknown.

2. Interior Surfaces

a. Underside of Roof

1) The condition of the interior roof surfaces must be rated as fair to good.

2) Random minor corrosion on the wall and columns is typically the result of tie wire not having sufficient coverage or form hardware not being completely removed.

3) Minor cracking on the roof is due to the same reasons noted above in section 1. a. 3).

4) Moderate corrosion at the roof penetrations is the result of the coating system far exceeding its expected life and possible damage caused during previous maintenance intervals. Staining is due to excess moisture running down the concrete surfaces.

b. Walls, Appurtenances, and Bottom

1) The condition of the concrete wall surfaces must be rated as fair to good based on the limited observation of the walls due to the dark brown staining on all surfaces below the high water level. The overall condition of the bottom surfaces is unknown as water and debris were covering a large percentage of the surfaces at the time of the evaluation.

2) Minor cracking of concrete surfaces commonly occurs in concrete as it cures and typically does not cause a problem. No weeping or corrosion is present, indicating the cracking is likely only on the surface.

3) Severe corrosion and deterioration of the ladder appears to be the result of the age of the coating system and lack of maintenance.

4) The filled and patched penetration appears to be in good condition, however the procedure used to fill the penetration is unknown.

5) Moderate tubercles on the wall and columns appear to be the result of reinforcing steel not having sufficient coverage to

protect the steel.

6) Dirt and debris on the bottom are due to a combination of contaminates coming through the inlet that settle on the horizontal surfaces over time and vandals throwing debris into the digester.

3. Safety, Health, and Code Features

a. Lack of handrailing assemblies around roof hatch/work areas and on the stairway is in violation of OSHA Regulations and creates a safety hazard.

b. The cracking on the exterior stairway creates a safety concern as the cracking has likely weakened the stairway.

c. The interior ladder is unsafe due to the severe corrosion and deterioration present.

V RECOMMENDATIONS

A. Based on the above noted observations, the following recommendations are offered:

1. Exterior Surfaces

a. The exterior surfaces are in overall fair to good condition, but require miscellaneous repairs as noted below:

1) The severely corroded roof ports, piping, and miscellaneous hardware should be replaced if the structure is rehabilitated.

2) All exterior concrete surfaces should be abrasively sweep blast cleaned or high pressure water blasted to remove all loose paint and concrete, and surfaces should be repainted if aesthetics are a concern.

3) The cracked portion of the stairway should be reinforced to prevent further movement and strengthen this section.

4) Cracks and spalls on the concrete surfaces should be thoroughly cleaned by brush-off blast cleaning, chipping, grinding, etc., and the areas repaired with a cementitious material.

5) The City may wish to remove the dirt berm before the next maintenance interval to expose the wall and facilitate necessary repairs.

2. Interior Surfaces

a. The interior concrete surfaces are in overall fair to good condition. The following recommendations are based on the limited field evaluation, making assumptions due to heavy staining on the interior walls, and water, sediment, and debris in the bottom of the tank. For HAE to

prepare a thorough specification with a complete scope of work and an accurate number of repair spots and/or lineal footage for cracks, etc., it would be necessary to clean the interior walls and floor.

1) Random spot corrosion, spalls, and hairline cracks on the concrete surfaces should be thoroughly cleaned by brush-off blast cleaning, chipping, grinding, etc., and the area repaired with a cementitious material.

2) The steel appurtenances that are not deteriorated beyond repair should be abrasive blast cleaned to Near White Metal (SSPC-SP10) and a three coat epoxy coating system applied to a minimum total dry film thickness of 15.0 mils.

3) Piping with severe deterioration should be removed or replaced depending on the City's requirements.

4) The deteriorated sealant/coating over the patched penetration should be removed and surfaces abrasively blast cleaned and a three coat epoxy coating system applied to a minimum total dry film thickness of 20.0 mils.

5) Random debris on the bottom surfaces should be removed before utilizing for water storage.

3. Safety, Health, and Code Features

a. Handrailing meeting OSHA Regulations must be installed.

b. As noted above, the cracked portion of the stairway should be reinforced.

c. An interior ladder meeting OSHA Regulations should be installed.

VI COST ESTIMATES

A. Based on current and previous projects of similar scope, preliminary cost estimates for work as noted in RECOMMENDATIONS were calculated by using data from those projects.

1. Exterior Surfaces

a. Replacing the severely corroded roof ports and piping would be in the range of $12,000 to $15,000.

b. Repainting the exterior roof and wall surfaces and exposed reinforcing steel and piping would be in the range of $21,000 to $26,000.

c. Reinforcing the cracked portion of the stairway would be in the range of $4,000 to $6,000.

d. Repairing random cracks and spalls would be in the range of $5,000 to $7,000.

2. Interior Surfaces

   a. Repairing random spot corrosion, spalls, and hairline cracks would be in the cost range of $80 to $100 per spot, for an estimate of approximately 500 spots, or $40,000 to $50,000.

   b. Recoating all repairable steel appurtenances and the patched penetration would be in the range of $5,000 to $8,000.

   c. Removing the severely deteriorated piping would be approximately $5,000. In addition, replacing the existing piping would be in the range of $8,000 to $12,000.

   d. Removing the debris from the bottom surfaces could be accomplished by City personnel or added to the above contract for minimal cost.

3. Safety, Health, and Code Features

   a. Installing handrailing meeting OSHA Regulations would be approximately $10,000.

   b. Removing the existing interior ladder and installing one meeting OSHA Regulations would be approximately $4,000.

Respectfully submitted,

HARPER & ASSOCIATES ENGINEERING, INC.

Andre Harper
Project Engineer

HARPER & ASSOCIATES ENGINEERING, INC.

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PHOTOGRAPHIC SURVEY

PROJECT:	Corrosion Engineering Evaluation of Two Concrete Water Storage Structures
STRUCTURE:	Interior of the 430,000 Gallon Reinforced Concrete Digester
OWNER:	Brezack & Associates Planning
LOCATION:	Pacific Grove, California
PHOTOGRAPHED BY:	Andre Harper, Project Engineer
DATE:	July 2013

I-1 General view of the roof, illustrating random corrosion on the roof and columns.

I-2 View of the roof, illustrating cracking and random spots of corrosion.

I-3 Same as Photo I-2, except at a different location.

I-4 Same as Photos I-2 and I-3, except at a different location.

I-5 View of a portion of the roof, illustrating random corrosion on the roof and column.

I-6 Same as Photo I-5, except at a different location.

I-7 View of a roof penetration, illustrating corrosion and staining.

I-8 Same as Photo I-7, except at a different location.

I-9 Same as Photos I-7 and I-8, except a closer view of the penetration and corrosion present.

I-10 View of a mixing port, illustrating corrosion on the mixing port and staining on the adjacent concrete.

I-11 Same as Photo I-10, except at a different port.

I-12 View of a secondary roof hatch, illustrating minor random spots of corrosion and otherwise generally good condition of the concrete surfaces.

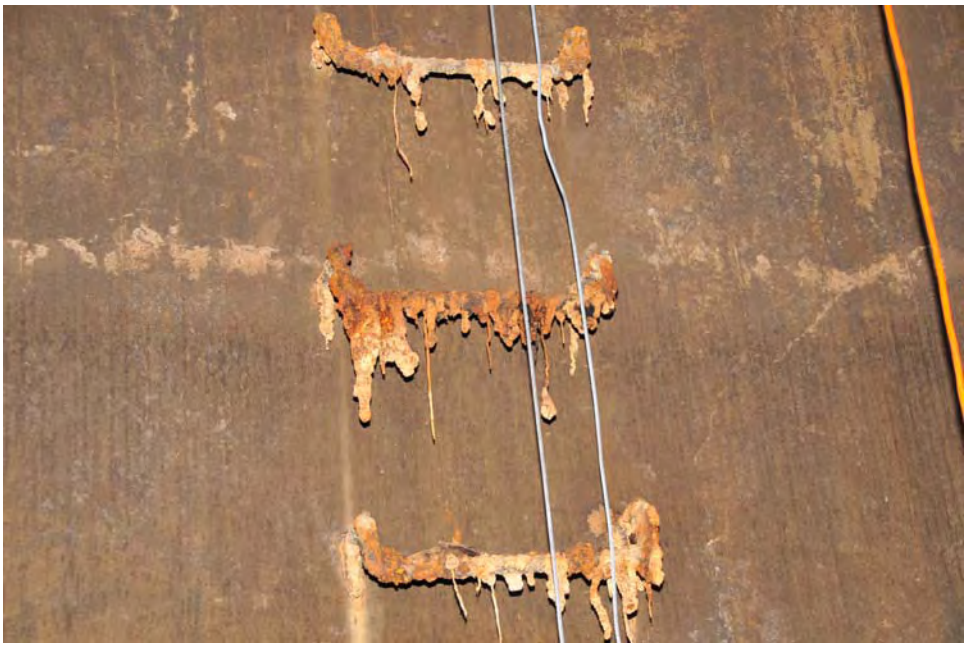
I-13 View of the overflow box, illustrating severe corrosion of the piping and generally good condition of the concrete.

I-14 View of the roof to wall transition, illustrating minor cracking and random spots of corrosion on adjacent surfaces.

I-15 Same as Photo I-14, except at a different location.

I-16 View of the roof hatch and upper portion of the ladder, illustrating severe corrosion on the ladder rungs and piping. Note a ladder rung has corroded through.

I-17 View of the ladder, illustrating severe corrosion.



I-18 Same as Photo I-17, except at the bottom of the ladder.

I-19 View of a portion of the wall, illustrating residue and staining of the concrete surfaces.

I-20 View of the wall, illustrating an isolated area with cracking present.

I-21 View of the wall, illustrating minor cracking and staining of the concrete surfaces. Note large rust tubercle at the top right side of the photo.

I-22 View of the wall, illustrating a penetration that has been filled and patched.

I-23 View of the wall, illustrating a large tubercle and staining present.

I-24 Same as Photo I-23, except in a different location.

I-25 View of the sludge withdrawal pipe, illustrating severe corrosion of the pipe.

I-26 Same as Photo I-25, except at the end of the pipe.

I-27 Same as Photos I-25 and I-26, except a closer view of the end.

I-28 View of the wall to bottom transition, illustrating residue and staining of the concrete surfaces and dirt and debris in the water.

I-29 Same as Photo I-28, except at a different location.

I-30 View of a column, illustrating moderate corrosion leaching from the concrete.

I-31 Same as Photo I-30, except at a different column.

I-32 Same as Photos I-30 and I-31, except at a different location.

I-33 View of the bottom of a column, illustrating corrosion just above the waterline.

I-34 Same as Photo I-33, except at a different location.

I-35 View of the bottom, illustrating dirt and debris in the water.

I-36 Same as Photo I-35, except at a different location.

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PHOTOGRAPHIC SURVEY

PROJECT:	Corrosion Engineering Evaluation of Two Concrete Water Storage Structures
STRUCTURE:	Exterior of the 430,000 Gallon Reinforced Concrete Digester
OWNER:	Brezack & Associates Planning
LOCATION:	Pacific Grove, California
PHOTOGRAPHED BY:	Andre Harper, Project Engineer
DATE:	July 2013

E-1 General view of the Digester, illustrating spalling of the concrete and delamination of the paint system.

E-2 Overall view of the roof, illustrating generally good condition of the concrete surfaces and random corrosion and staining on the appurtenances.

E-3 View of a roof penetration, illustrating the poor condition of the circular steel cover and fair to good condition of the adjacent concrete curb.

E-4 Same as Photo E-3, except at a different penetration.

E-5 View of a portion of the roof, illustrating minor cracking of the concrete surfaces.

E-6 Same as Photo E-5, except at a different location.

E-7 View of the inlet pipe, illustrating moderate to severe corrosion of the pipe with staining of adjacent surfaces.

E-8 Same as Photo E-7, except from a different angle.

E-9 View of the roof hatch, illustrating severe corrosion of the cover.

E-10 View of the roof hatch, illustrating staining and rust scale.

E-11 View of the underside of the stairway, illustrating spalling and cracking present.

E-12 View of the upper portion of the wall, illustrating delamination, spalling, and random corrosion on the reinforcing steel.

E-13 View of the upper portion of the wall, illustrating spalling of the concrete and delamination of the paint system.

E-14 Same as Photo E-13, except at a different location.

E-15 Same as Photos E-13 and E-14, except at a different location.

E-16 View of the overflow, illustrating severe corrosion of the piping and delamination of the adjacent paint system.

E-17 Same as Photo E-16, except further down the overflow.

E-18 View of a portion of the wall, illustrating a dirt berm that has been pushed up against the wall.

E-19 Same as Photo E-18, except at a different location.

E-20 Same as Photos E-18 and E-19, except at a different location.

E-21 View of a portion of the wall, illustrating a penetration that has been filled and patched.

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CORROSION REPORT

PROJECT:	Corrosion Engineering Evaluation of Two Concrete Water Storage Structures
STRUCTURE:	210,000 Gallon Reinforced Concrete Clarifier
OWNER:	Brezack & Associates Planning
LOCATION:	Pacific Grove, California
INVESTIGATED BY:	Andre Harper, Project Engineer
DATE:	July 2013

I GENERAL INFORMATION

A. Construction and Maintenance Details

Structure is a partially buried circular reinforced concrete clarifier which is currently being utilized for water storage. The structure is located in Pacific Grove, California. The clarifier was constructed in 1952 and has a diameter of 55 feet, an approximate overall height of 15 feet, and a maximum water depth of approximately 12 feet. The roof is self supporting. Access into the clarifier is through the floor of the administration building.

B. Site Conditions

The clarifier is located on a dirt and asphalt site and enclosed by a chain link fence. The clarifier is partially buried with approximately three feet of the clarifier wall exposed. There is adequate vehicle access around the clarifier. No difficulty is anticipated for Contractor mobilization, assuming use of normal portable air compressor and related equipment.

There is a golf course in close proximity which could be adversely affected by dust and contamination associated with abrasive blast cleaning and painting operations. Accordingly, extreme caution must be exercised during all cleaning and painting operations.

C. Existing Coating, Paint, and Sealant Systems

1. No records for the coatings, paints, or sealants were made available to HAE for review. The field investigation indicates the following:

a. Interior Surfaces

1) Concrete surfaces are uncoated.

2) The interior appurtenances appear to be a combination of coated carbon and galvanized steel, and random plastic.

b. Exterior Surfaces

1) Concrete roof surfaces are covered with a tar and gravel roofing system.

2) Concrete wall surfaces are painted with an unknown paint system.

3) Exterior appurtenances appear to be a combination of galvanized, stainless, and painted carbon steel, and plastic.

D. Cathodic Protection System

The clarifier has no cathodic protection system installed on the interior of the structure.

E. Heavy Metal Analyses

No samples of interior coatings or paints were removed for analyses for the presence of heavy metals, specifically lead, chromium compounds, zinc, or asbestos, as this was not included in the scope of work.

F. Contract Information

Harper & Associates Engineering, Inc. was retained by Brezack & Associates Planning to accomplish field investigation of two concrete structures to observe interior and exterior surfaces and conditions, with photographs taken to record conditions. This report has been prepared with remedial repair/recoating/repainting recommendations and cost estimates for accomplishing the work.

This Corrosion Report is prepared solely on the basis of noted field investigation. Conclusions and recommendations are strictly those determined by Consultant to be consistent with the best and most experienced practice within the corrosion engineering profession.

II INVESTIGATION

A. Investigation was accomplished as follows:

1. Exterior Surfaces

a. Investigation of the roof surfaces and appurtenances on the roof was accomplished by traversing the roof.

b. Investigation of the exposed portion of the wall was accomplished by traversing the perimeter of the clarifier from ground level, examining areas above grade and within reach.

c. Photographs were taken of typical and specific areas to illustrate condition of surfaces.

2. Interior Surfaces

a. No interior ladder is present so a temporary extension ladder was utilized to access the interior of the clarifier.

b. Interior surfaces were examined visually by traversing the upper portion of the slope as the water was too deep to access the middle of the bottom surfaces.

c. Light was supplied via high intensity portable light and natural light from roof hatches.

d. Various chipping tools were employed to examine typical areas of defective concrete and coating within reach.

e. Photographs were taken of typical and specific areas to illustrate condition of surfaces.

III OBSERVATIONS

A. Based upon the above reported investigation, the following observations were noted:

1. Exterior Surfaces

a. Administration Building Roof and Appurtenances

1) Overall, the roofing material and appurtenances are in fair to poor condition. (Photos E-2 through E-5)

2) Minor corrosion is present on the vent covers. (Photo E-3)

3) Sections of the roof have minimal gravel remaining. (Photos E-2 through E-5)

4) Severe corrosion is present at the roof ports. (Photos E-4 and E-5)

b. Above Grade Wall Surfaces

1) The exposed portions of the walls are in overall fair to good condition with random isolated spalls, cracks, and surface

deterioration present. (Photos E-6 through E-18)

2) Delamination of the paint system is present on the top of the wall. (Photos E-6 and E-8 through E-10)

3) Severe corrosion is present on the ladder and the siderails at the top of the ladder have corroded off. (Photos E-6 and E-7)

4) Corrosion is present at the miscellaneous hardware and appurtenances. (Photos E-8 through E-12 and E-15 through E-18)

5) Spalling with corroding reinforcing steel is present randomly on the walls above grade. (Photos E-12 through E-14 and E-16 through E-18)

c. Interior of Administration Building

1) The concrete surfaces in the administration building are in overall good condition with black soot on a majority of the upper surfaces. (Photos E-19 through E-26)

2) Minor to moderate corrosion is present at a roof access hatch and door frame. (Photos E-22 and E-23)

3) Existing doors in the interior concrete walls were widened by saw cutting adjacent concrete, leaving reinforcing steel exposed to the elements. (Photos E-20, E-24, and E-25)

2. Interior Surfaces

a. Underside of Roof

1) The concrete roof surfaces are in overall good condition. (Photos I-1 through I-12)

2) Random minor spots of corrosion are present on the roof surfaces. (Photos I-1 through I-5, I-11, and I-12)

3) The top layer of concrete is randomly delaminating. (Photo I-7)

4) Moderate to severe corrosion is present at a secondary roof hatch, fittings, and piping. (Photos I-8 through I-10)

b. Effluent Weir

1) The concrete surfaces in the effluent weir are in fair condition, however severe corrosion is present on the weirs and piping. (Photos I-9 through I-22)

2) Severe corrosion and rust scale are present at the weirs, mounting brackets, and piping. (Photos I-9 through I-16 and I-18

through I-22)

3) The top layer of concrete is randomly delaminating on the roof. (Photos I-15 and I-16)

4) Minor deterioration of the concrete is present at the top of a column. (Photo I-17)

5) Spalls are developing on the corner of a support beam. (Photos I-21 and I-22)

c. Walls, Appurtenances, and Bottom

1) The concrete walls are in overall good condition with dark staining present. The bottom surfaces could not be evaluated due to water and debris covering the horizontal surfaces. (Photos I-23 through I-37)

2) Moderate corrosion is present at the primary roof hatch. (Photos I-24 through I-26)

3) Random debris and dirt are present on the bottom surfaces. (Photos I-27 through I-29 and I-32 through I-37)

4) An oily substance is present randomly on the walls. (Photo I-31)

3. Safety, Health, and Code Features

a. No handrailing assembly is present on the roof at the ladder.

b. No self-closing gate is present at the termination of the ladder onto the roof.

c. The exterior ladder is severely corroded.

IV CONCLUSIONS

A. Based on the above noted observations, the following conclusions are drawn:

1. Exterior Surfaces

a. Administration Building Roof and Appurtenances

1) Roofing materials and appurtenances are in fair to poor condition.

2) Minor corrosion on the vent covers appears to be the result of impurities in the stainless steel covers and the corrosive saltwater environment.

3) Sections of the roof with minimal gravel remaining appear to be the result of the age of the roofing system and weathering that

has occurred over the years.

4) Severe corrosion on the roof ports appears to be the result of the paint and coating systems protecting the substrate far exceeding their life expectancy. Typical paint and coating systems have a 20 to 25 year life expectancy.

b. Above Grade Wall Surfaces

1) The visible portions of the walls are in fair to good condition even though there are isolated areas of exposed reinforcing steel, random hairline cracking, and miscellaneous cosmetic issues that could lead to further damage if they are not remediated.

2) Delamination of the paint system on the concrete surfaces appears to be due to the age of the system and lack of maintenance.

3) Severe corrosion on the ladder and miscellaneous hardware and appurtenances appears to be the result of the paint system far exceeding its life expectancy and damage and/or defects to the galvanized components.

4) Spalling is the result of either cracks in the concrete or placing the reinforcing steel too close to the surface. When moisture reaches the steel, it begins to corrode and rust scale forms causing the spalling.

5) Random minor corrosion on the wall is typically the result of tie wire not having sufficient coverage or form hardware not being completely removed.

c. Interior of Administration Building

1) The concrete surfaces inside the building are in good condition.

2) Black soot on a majority of the surfaces is the result of a fire previously set by vandals.

3) Corrosion on the access hatch and door is due to a combination of the age of the paint system, corrosive saltwater environment, and damage to the paint system caused by personnel.

4) Corrosion on the exposed reinforcing steel at the widened doorway is the result of not protecting the carbon steel after saw cutting the door.

2. Interior Surfaces

a. Underside of Roof

1) The condition of the interior roof surfaces must be rated as good.

2) Random minor spots of corrosion on the roof are due to the same reasons noted above in section 1. b. 5).

3) The delaminating top layer of concrete is typically the result of poorly mixed concrete or excess water to cement ratio.

4) Moderate to severe corrosion at appurtenances is the result of the coating system far exceeding its expected life and possible damage caused during previous maintenance intervals.

b. Effluent Weir

1) The condition of the concrete surfaces in the effluent weir is fair to good, but the bottom surfaces could not be evaluated as they were covered with sediment and debris.

2) Severe corrosion at the weirs, mounting brackets, and piping is the result of the coating system far exceeding its typical life expectancy of 20 to 25 years.

3) Delaminating concrete is due to the same reasons noted above in section 2. a. 3).

4) Minor deterioration of the concrete on the upper portion of a column appears to be the result of defects in the concrete during the original construction.

5) Severe cracking on the corner of the support beam does not appear to be due to internal corrosion as no rust stain is present and may be due to uneven settlement or flaws in the original construction.

c. Walls, Appurtenances, and Bottom

1) The condition of the concrete wall surfaces must be rated as good.

2) Staining on the surfaces in the fluctuation zone is the result of contaminates and minerals in the water that adhere to the surfaces over time.

3) Moderate corrosion on the roof hatch framing and cover appears to be due to the age of the galvanized coating and possible damage that occurred during previous maintenance intervals.

4) Dirt and debris on the bottom are due to a combination of contaminates coming through the inlet that settle on the horizontal surfaces over time and vandals throwing debris into the clarifier.

5) An oily substance randomly on the wall is typically the result of

contaminates in the water that adhere to the surfaces within the fluctuation zone over time.

3. Safety, Health, and Code Features

a. Lack of handrailing assembly around roof hatch/work area is in violation of OSHA Regulations and creates a safety hazard.

b. Lack of a self-closing gate at the termination of the ladder at roof level is in violation of OSHA Regulations.

c. The exterior ladder is unsafe due to the severe corrosion present.

V RECOMMENDATIONS

A. Based on the above noted observations, the following recommendations are offered:

1. Exterior Surfaces

a. The exterior surfaces are in overall fair to good condition, but do require miscellaneous repairs as noted below:

1) Corrosion on the vent covers is very minor and should be considered only an aesthetic concern at this time. However, given the severe corrosion of the miscellaneous appurtenances, the internal portions of the vent structure may require repair or replacement. Therefore, it is recommended the vent covers be removed and the structures inspected to determine if repair or replacement is necessary.

2) The roofing system is deteriorated and may result in rainwater leaking into the administration building; however the deterioration should not pose additional concerns. If it is decided to rehabilitate the administration building, the existing roof material should be removed and replaced.

3) The severely corroded roof ports and miscellaneous hardware should be replaced when the new roofing system is installed.

4) Corroded metal door frames should be replaced with new frames before new doors are hung.

5) Corroded piping and exposed reinforcing steel should be repainted at the next maintenance interval. This would require surfaces be blast cleaned to Near White Metal (SSPC-SP10), primed, and two finish coats applied.

6) All exterior concrete surfaces should be abrasively sweep blast cleaned or high pressure water blasted to remove all loose paint and concrete, and surfaces should be repainted if aesthetics are a concern.

7) Cracks and spalls on the concrete surfaces should be thoroughly cleaned by brush-off blast cleaning, chipping, grinding, etc., and the area repaired with a cementitious material.

2. Interior Surfaces

a. The interior concrete surfaces are in overall good condition. The following recommendations are based on the limited field evaluation, making assumptions due to heavy staining on the interior walls, and water, sediment, and debris in the bottom of the tank and the weir channel. For HAE to prepare a thorough specification with a complete scope of work and an accurate number of repair spots and/or lineal footage for cracks, etc., it would be necessary to clean the interior walls, floor, and weir channels.

1) Random spot corrosion, delaminating concrete, spalls, and hairline cracks on the concrete surfaces should be thoroughly cleaned by brush-off blast cleaning, chipping, grinding, etc., and the area repaired with a cementitious material.

2) The steel appurtenances, including hatches, fittings, and piping, should be abrasive blast cleaned to Near White Metal (SSPC-SP10) and a three coat epoxy coating system applied to a minimum total dry film thickness of 15.0 mils.

3) Severe cracking on the support beam would require further evaluation by a structural engineer to determine the method of repair and/or replacement.

4) The severely corroded effluent weirs should be removed during the rehabilitation of the structure. The mounting bracket bolts should be coated and/or ground down and covered with a cementitious repair material.

5) Random debris on the bottom surfaces should be removed before utilizing for water storage.

3. Safety, Health, and Code Features

a. Handrailing meeting OSHA Regulations must be installed.

b. A self-closing gate meeting OSHA Regulations must be installed at the termination of the ladder at roof level.

c. An exterior ladder meeting OSHA Regulations should be installed.

VI COST ESTIMATES

A. Based on current and previous projects of similar scope, preliminary cost estimates for work as noted in RECOMMENDATIONS were calculated by using data from those projects.

1. Exterior Surfaces

    a. If deemed necessary, replacing the roof vents after removing the covers would be approximately $8,000.

    b. Replacing the roofing system would be approximately $35,500.

    c. Removing or replacing the severely corroded roof ports and miscellaneous hardware would be approximately $2,200.

    d. Repainting the exterior wall surfaces and exposed reinforcing steel and piping would be in the range of $14,000 to $18,000.

    e. Repairing random cracks and spalls would be in the range of $6,000 to $8,000.

2. Interior Surfaces

    a. Repairing random spot corrosion, delaminating concrete, spalls, and hairline cracks would be in the cost range of $80 to $100 per spot, for an estimate of approximately 300 spots, or $24,000 to $30,000.

    b. Recoating all steel appurtenances would be in the range of $10,500 to $15,500.

    c. Removing the effluent weirs and brackets would be approximately $9,800.

    d. Removing the debris from the bottom surfaces could be accomplished by City personnel or added to the above contract for minimal cost.

3. Safety, Health, and Code Features

    a. Installing handrailing meeting OSHA Regulations would be approximately $7,000.

    b. Installing a self-closing gate at the termination of the ladder at roof level would be approximately $1,200.

    c. Removing the existing exterior ladder and installing one meeting OSHA Regulations would be approximately $4,000.

Respectfully submitted,

HARPER & ASSOCIATES ENGINEERING, INC.

Andre Harper
Project Engineer

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PHOTOGRAPHIC SURVEY

PROJECT:	Corrosion Engineering Evaluation of Two Concrete Water Storage Structures
STRUCTURE:	Interior of the 210,000 Gallon Reinforced Concrete Clarifier
OWNER:	Brezack & Associates Planning
LOCATION:	Pacific Grove, California
PHOTOGRAPHED BY:	Andre Harper, Project Engineer
DATE:	July 2013

I-1 General view of the roof, illustrating good condition of the concrete with random spots of corrosion present. Note circular hole where clarifier drive mechanism has been removed.

I-2 View of a portion of the roof, illustrating good condition of the concrete with random spots of corrosion.

I-3 Same as Photo I-2, except at a different location.

I-4 View of the clarifier roof, illustrating random spots of corrosion.

I-5 View of the roof, illustrating random spots of corrosion and otherwise good condition of the concrete surfaces.

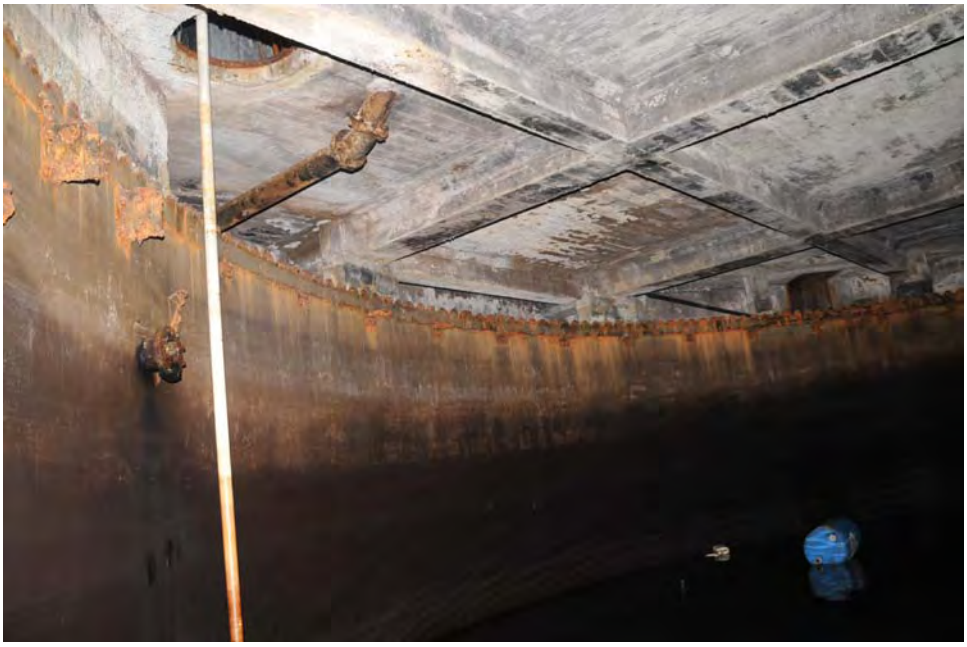
I-6 View of the roof, illustrating generally good condition of the concrete surfaces.

I-7 View of the roof, illustrating delamination of the top layer of concrete.

I-8 View of a secondary roof hatch, illustrating minor corrosion at the circumference of the hatch and on adjacent roof surfaces.

I-9 View of sanitary plumbing for the above administration building, illustrating severe corrosion on the metal fittings and adjacent weir.

I-10 View of the roof and wall, illustrating moderate to severe corrosion on the piping and weir.



I-11 View of the roof to wall transition, illustrating minor random corrosion on the support beam and severe corrosion on the weir.

I-12 Same as Photo I-11, except at a different location.

I-13 View of a portion of the weir, illustrating severe corrosion on the weir and mounting brackets.

I-14 Same as Photo I-13, except at a different location.

I-15 View of the interior effluent weir surfaces, illustrating severe corrosion on the weirs and delamination of the adjacent concrete roof surfaces.

I-16 Same as Photo I-15, except at a different location.

I-17 View of a concrete support from inside the effluent weir, illustrating minor deterioration of the upper portion of the column.

I-18 View of the interior effluent weir surfaces, illustrating the good condition of the concrete surfaces. Note moderate to severe corrosion on the pipe in the background.

I-19 Same as Photo I-18, except at a different location.

I-20 View of the interior effluent weir surfaces, illustrating severe corrosion on the weirs and piping.

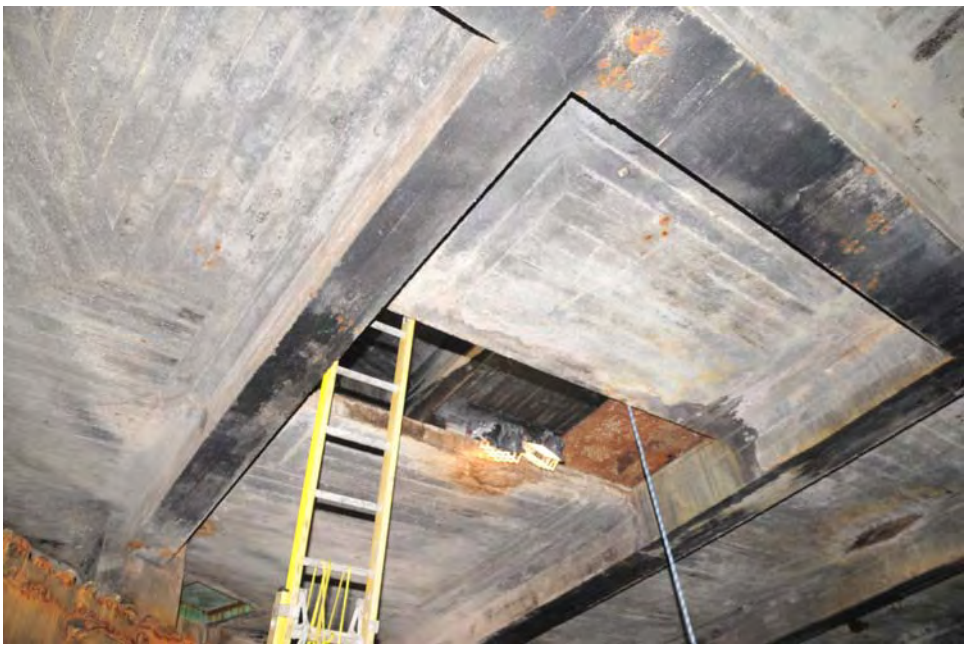
I-21 View of a roof support beam just inside an effluent weir access hatch, illustrating severe cracking on the corner of the beam.

I-22 Same as Photo I-21, except from a slightly different angle.

I-23 View of the roof to wall transition, illustrating the good condition of the concrete surfaces.

I-24 View of the roof hatch, illustrating moderate corrosion at the hatch framing and cover and minor random corrosion on the adjacent concrete surfaces.

I-25 Same as Photo I-24, except a closer view.



I-26 Same as Photos I-24 and I-25, except a close-up view of the hatch opening.

I-27 View of a portion of the wall, illustrating good condition of the concrete with staining present. Note random debris floating in the water.

I-28 Same as Photo I-27, except at a different location. Note traffic cones on bottom.

I-29 View of the wall, illustrating good condition of the concrete and staining present.

I-30 Same as Photo I-29, except at a different location.

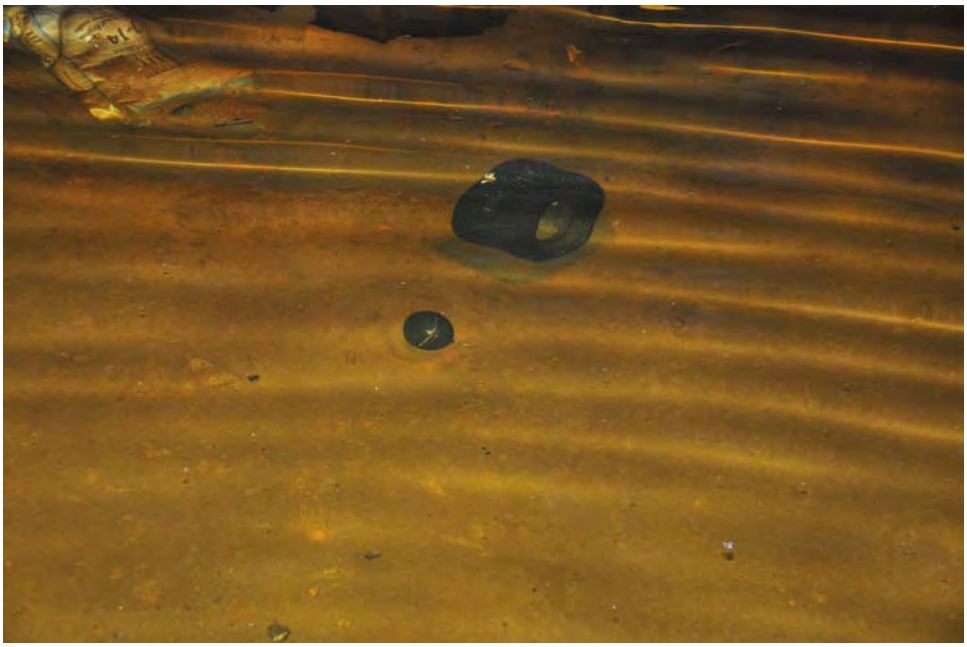
I-31 View of the wall, illustrating an oily substance on the surface.

I-32 View of the wall to bottom transition, illustrating good condition of the concrete with staining present.

I-33 Same as Photo I-32, except at a different location.

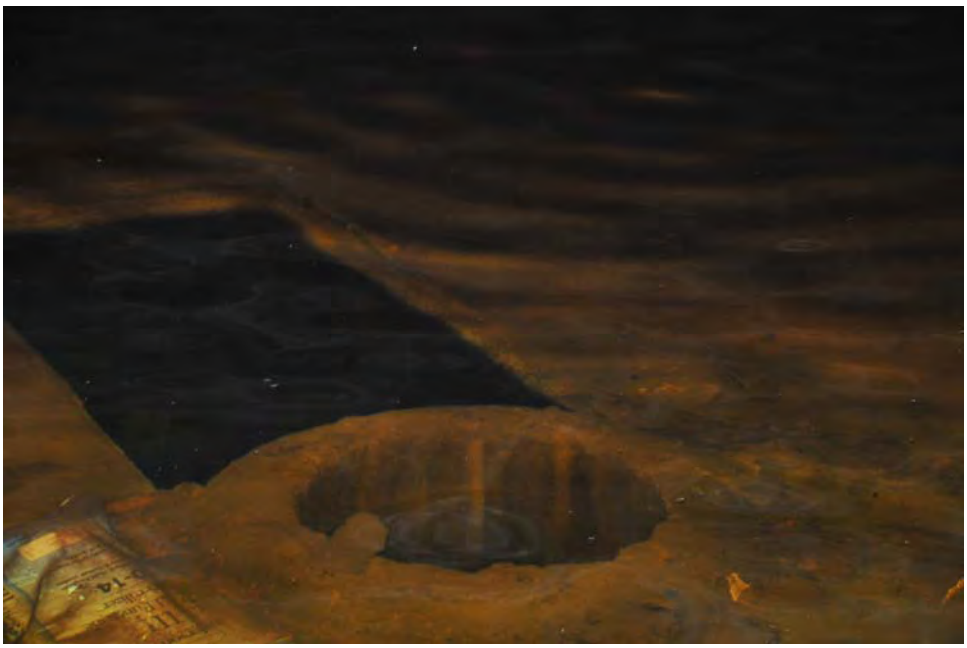
I-34 View of the bottom, illustrating dirt and debris in the water.

I-35 Same as Photo I-34, except at a different location.



I-36 View of the sludge pocket and influent well, illustrating dirt and debris on the adjacent bottom surfaces.

I-37 Same as Photo I-36, except a closer view of the penetrations.



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PHOTOGRAPHIC SURVEY

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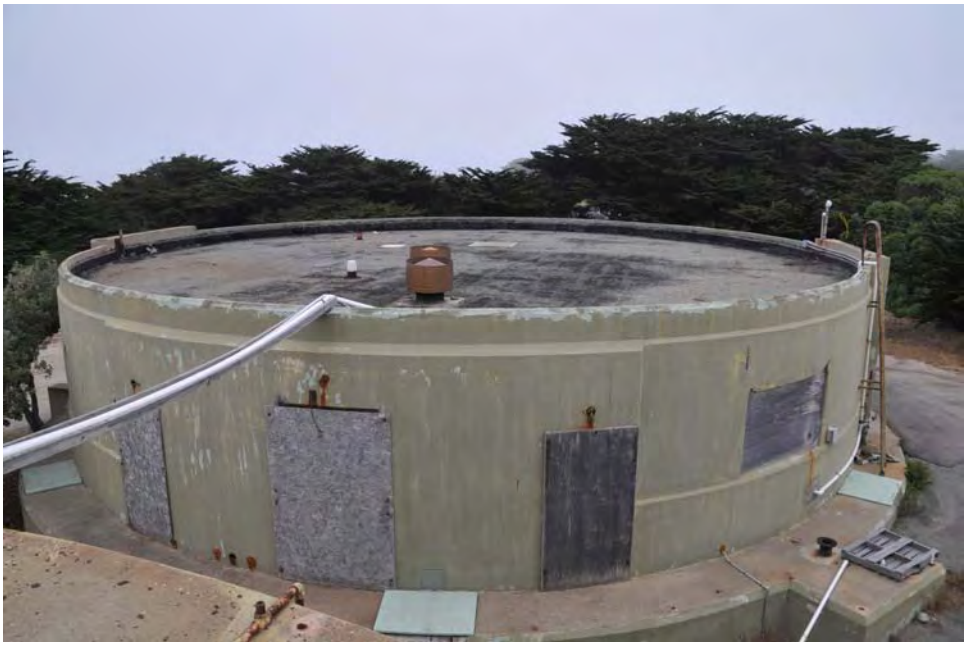
LOCATION:	Pacific Grove, California
PHOTOGRAPHED BY:	Andre Harper, Project Engineer
DATE:	July 2013

E-1 General view of the administration building and top of the Clarifier, illustrating generally good condition of the concrete surfaces.

E-2 Overall view of the administration building roof, illustrating the fair condition of the roofing material.



E-3 View of the roof, illustrating minor corrosion on the vent covers and sections with minimal gravel remaining.

E-4 Same as Photo E-3, except at a different location. Note severe corrosion on a roof port.

E-5 View of a roof port, illustrating severe corrosion and minimal gravel on the adjacent roof surfaces.

E-6 View of a portion of the wall, illustrating delamination of the paint system on the top of the wall and severe corrosion on the ladder. Note siderails have corroded off near the top.

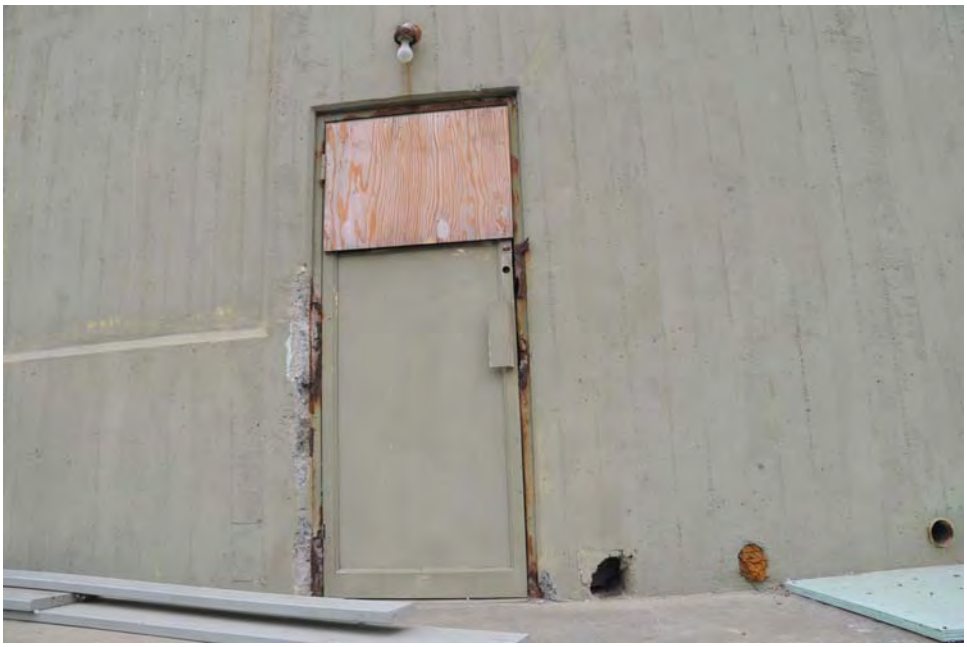
E-7 Close-up view of the ladder, illustrating severe corrosion present.

E-8 General view of the exterior, illustrating delamination of the paint system and random corrosion on the appurtenances.

E-9 Same as Photo E-8, except at a different location.

E-10 Same as Photos E-8 and E-9, except at a different location.

E-11 View of a door, illustrating moderate to severe corrosion on the door frame.



E-12 View of the primary rollup door, illustrating a large spall and random corrosion on the reinforcing steel and adjacent concrete.

E-13 Same as Photo E-12, except at a different location.

E-14 Same as Photos E-12 and E-13, except at a different location. Note hairline cracking on adjacent concrete surfaces.

E-15 View of an access hatch for the effluent weir, illustrating general corrosion on the metal framing and generally good condition of the concrete at adjacent surfaces. Note severe cracking of the concrete beam just under the hatch.

E-16 View of a portion of the wall, illustrating spalling and corrosion on the exposed reinforcing steel.

E-17 Same as Photo E-16, except at a different location.

E-18 View of a penetration, illustrating moderate to severe corrosion.

E-19 General view of the interior of the administration building, illustrating generally good condition of the concrete surfaces.

E-20 Same as Photo E-19, except at a different location. Note door has been widened in this location.

E-21 View of the roof and a support beam, illustrating good condition of the concrete surfaces. Note black soot on a majority of the surfaces.

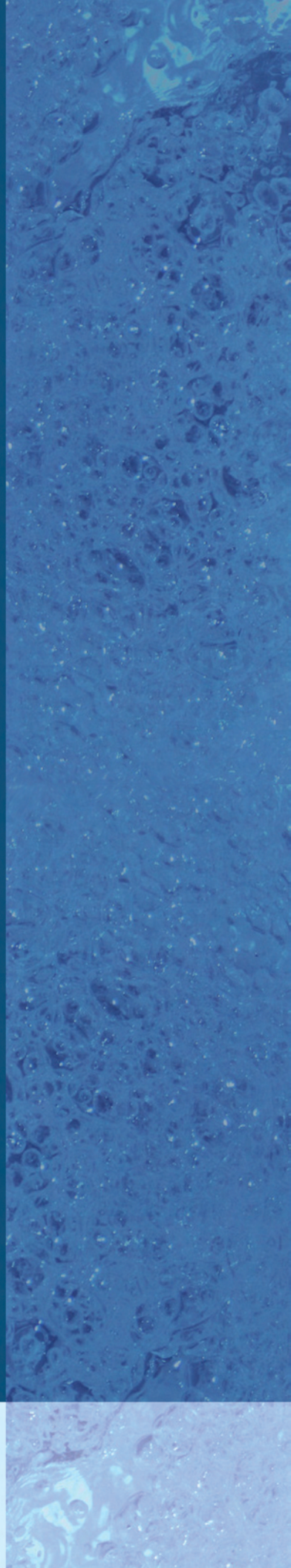
E-22 Same as Photo E-21, except at a different location. Note corrosion on the access hatch.

E-23 View of the exterior wall, illustrating moderate to severe corrosion on the door frame and good condition of the concrete surfaces.

E-24 View of an interior wall, illustrating a door that was widened and minor corrosion on the exposed reinforcing steel.

E-25 Same as Photo E-24, except at the bottom of the doorway. Note concrete on floor is not flush with adjacent surfaces.

E-26 General view of the wall and bottom, illustrating good condition of the concrete.



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